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but cut out entirely. Then keep up vitality by culture and fertilizing. Intelligent treatment is most important. In spraying never use Bordeaux mixture after the buds have swollen. Spray thoroughly before; later, pick and burn all rotted fruit.

Connecticut. J. H. HALE.

A Business Barn.
Three things we want are warmth, sunshine and ventilation. The right temperature is from 50° to 60°. In my stable the temperature does not go below 50° in cold weather. The wall should be built with a space or dead-air chamber between the walls; this is made by boarding and papering on both sides of the studding, instead of putting the building paper between the boards on the outside of the studding.

I do not build the stable over nine feet high and give each cow about five hundred

turning out large quantities of the crops first named. Lettuce is looking well, with few signs of droop and mildew. Some of the houses are occupied with cabbages and radishes at the same time, the radishes being done with before the cabbages are large enough to need all the room. The vines are trained on the wood and wire trellises in the usual manner. Some of the growers have been using old iron piping as frame for trellises, but apparently not with success, as in some cases the piping has been taken out and replaced with wood.

Outside the men were planting beets. The first planting is already up, also parsnips, onions, lettuce, radishes and other early hardy vegetables. On a plot beets were being set by transplanting. The plot, having been plowed and manured before, is divided into beds, four or five feet wide, by means of plow furrows. The space between

Such assertions that may be quite true under certain conditions.

After many years of practical experience in tile drainage, the writer is ready to admit that certain theoretical talk relative to tile drainage by many scientific writers, as well as others, to the effect that tile of a certain size (as a rule much too small) would effectually perform the work designed, has proved a fallacy in many instances. Practical, backbreaking, personal experience and the continued seasons of excessive rainfall have taught me that effective work cannot be attained until a radical change in regard to size of tile is adopted.

In years past, in fact, up to the present time, but a small proportion of the tile used on the farms of western New York exceeded two and three inches capacity; sufficient perhaps during seasons of moderate rainfall. Nearly all of us, although our tile

I raise will be ground for feeding pigs. Later on, if all goes well, I shall turn my attention to raising horses, as I have had some valuable experience in that line, and will do something in the poultry business also. As I am situated, with the condition of my land, the market around here, etc., I am sure it is better for me to follow this specialty.—V. T. Lundvall, Aroostook County, Me.

I find I can make good profits on milk at three cents per quart on my farm along the lower Hudson river. I have a herd of forty Guernseys, and the average produce per cow for twelve months, allowing six weeks when they are dry, is 5700 pounds. There are too many cows not producing three thousand pounds per year, and these are not worth the keeping.—E. VanAlstine, Herkimer County, N. Y.

this will stimulate them to raise more feeding stuffs than in the past.

Potatoes and beans have brought good prices, and quite a large acreage will be devoted to both these crops. Prices are a little better on sweet corn, and many farmers who live near the packing shops will plant quite largely of this crop.

Good help is scarce and wages high for good men. Many of our young men work in the mills and work at carpentering and other trades, so this serves to reduce the force for work upon the farms. Laborers surely ought not to complain of hard times, as there are not more than half enough men to supply the calls for help. And if it were not for the use of labor-saving farm implements, we could not get along with such light crews to run our farms.

We hope that our farmers will look over their stock of seeds. Do not use poor seed merely because you have them. Good seed insures good crops, and poor seed should not be used. Look over the markets and see what varieties sell best.

A. E. FAUGHT.

Kennebec County, Me.

Plea for the Shorthorns.

It is not best or necessary that a cow be kept on the farm until she dies of old age. One that produces good beef and milk until she passes her prime, and that will then fatten and make nice beef, should be the kind selected by the farmer. The general farmer cannot afford to keep cows to produce calves alone. The breeder of pure-bred cattle who breeds them for improving other farmers' herds, and who does not demonstrate the male produce, and the dairy farmer who lives near large cities, and who can afford to rear the male produce, are the only exceptions.

The general quality of the Shorthorns was proved at the Columbian Exposition, where they came in competition with other beef breeds. They won a majority of the prizes over all breeds combined, while in the dairy tests, that cost more than \$100,000 to conduct them, being by far the most costly ever made, the amount of milk produced by the champion Shorthorn cow Nora in ninety days was 3678.8 pounds, while the champion Jersey cow Brown Bessie produced 3634 pounds. The Guernsey cow Materna produced 3548.8 pounds. Again, in tests 2, 3 and 4, the three best Shorthorns, one in each class, including the two-year-old heifer, gave 5681 pounds, while Jerseys of the same description gave 5330 pounds, showing in favor of Shorthorns 351 pounds.

In the cheese test, with thirty-five cows in each test, judged by a scale of points, the Jerseys had 906.1, Shorthorns 905.3, Guernseys 871.9, showing that the Jerseys (only known as a dairy breed) had the advantage, on one-sixteenth of a point over Shorthorns, the latter having 33.6 points over the Guernseys.

In the score for perfection, of one hundred points, flavor was counted over half, fifty-five points. Shorthorns headed the list by taking 504.3, Jerseys 467.8 and Guernseys 487.4. Dairy cows are not always wanted for butter alone, or cheese alone, but very frequently to supply city customers with good milk for their tables. The test of the Columbian Dairy School proved that, for a large supply of milk of the best flavor, Shorthorns led the other two breeds, and were good dairy cows in every sense of the term. Therefore, if milk of good quality and lots of it is wanted, Shorthorn cows can supply it, to say nothing of their "general use" qualities that will just suit the farmer who wants buttermilk, beef and cheese. These inherent qualities are in them and can be brought out by cultivation, making and feeding for the desired object. If the desire is beef, they can furnish it, with enough of the other qualities to supply the needs of the farmer and breeder, without introducing crosses of strictly dairy breeds, and they will improve the steers that may be made. Steers are not good for dairy, and a dairy steer is but little good for beef.

The splendid dairy qualities possible to the breed are typified in the Shorthorn cow Belle 2d, by Coroner 79698, her record being 8449 pounds of milk from April 12 to Nov. 26. The illustration showing this fine cow is reproduced by favor of secretary E. D. Coburn of the Kansas Board of Agriculture. The milk averaged forty-three per cent. butter fat, and made 355 pounds of butter. Belle 2d is given merely as a typical specimen of the breed. Her record is by no means extreme. Another member of the same herd produced 8734.5 pounds of milk or 409 pounds of butter in a year. The grade Shorthorn cow Rose of the Wisconsin station herd produced 10,168 pounds of 4.2 per cent. milk in 326 days, worth \$114.92, at a food cost of \$35.06. Kitty Clyde of the Spencer herd of Pennsylvania gave 13,200 pounds of milk in eight months. Her dam, Fillipall, gave 60 pounds or nearly 30 quarts in one day.

The potter shapes his clay to suit his ideas of the wares he wishes to produce, but to succeed he must have the proper ingredients in the clay. So the cow, like the man, to be good and succeed, must be born a few generations back—the more the better—and trained along certain lines. I have no doubt any breed can be changed to a certain degree if mated and trained a long time for a certain object. If for beef, select males that have been bred for beef, or if for the dairy, males bred from a family for that purpose; if both for beef and dairy, along that line. I always tried to get bulls for use in my herd whose mothers were good milkers; while I bred for beef as the main object, yet I wanted cows that could raise their own calves without much or any assistance by "wet nurses." J. H. PICKRELL.

Ex-Secretary Shorthorn Breeders Association.



REGISTERED DEVON COW, CHRISTINE, NO. 10581.

Owned by R. I. Agricultural Experiment Station.

square feet of space. I do not build any more plank floors, but build them of cement, as the expense of the cement floor is but little more, and it will never wear out. For a foundation I compact the soil, then lay in small stones to the right level, then pour around them this cement and then put the finishing surface which is made of cement and sand and floated with a board to roughen it so the bedding will stick to it. Cut short pieces of iron pipe and anchor them in the cement for the studding for the partitions. The cement floor should be kept well bedded. I would plant the horse stalls.

H. C. COOK.

Onondaga County, N. Y.

Among the Market Gardeners.

The gardening season outdoors is considered a poor one so far. Considerable work has been done very early in the spring, but owing to the recent cold weather, gardeners find that progress has not been satisfactory. Seed too long in the ground does not come up evenly, and leaves many gaps to be filled by transplanting. Plants which have come up or which have been set outdoors are seriously checked and hindered, if not wholly spoiled, by the severe weather. Just how much injury has resulted remains to be seen.

Work was rushing on the great Allen market garden farm at Arlington, Saturday. About fifty acres are used, several acres about under glass. Greenhouse cucumbers are producing fairly well, although the crop is held back by the cloudy weather. Lettuce and radishes are also being gathered and marketed in large quantities. The only outdoor plants ready to sell are dandelions, but these are yielding fairly well. A gang of Italian women are busy cutting and cleaning them. Rhubarb will be ready soon. A new field of half an acre or so has been set this spring. Not many new plantings of this vegetable have been made in the Boston district the past few years on account of the decrease in average price and the growth of early shipments from the West and South.

A large force of men were carting and spreading manure, three heaps to a load, and the heaps about ten feet apart each way. The land had been plowed in the fall. The heaps when dumped were spread by hand and plowed under. The soil is fine and mellow from cultivation and the decay of heavy applications of manure. Plant furrows are made very straight, the plowman sighting by means of stakes moved for each furrow. Then the plants, early cabbages in this instance, are set two feet apart or less by rapid and expert workers. Mr. Allen considers the season a poor one, having been both early and late. Gardeners may be forced to do some of the early work over again, because of the unseasonable weather which came later.

At the Rawson farms, nearby, operations are conducted on a still larger scale. Crops under glass are much the same in the entire district around Boston. At this time of year they include lettuce, cucumbers, tomatoes, radishes, with some cress, mint and a little of such specialties as violets and bedding plants. The Rawson houses are

furrows is raked and leveled, and then divided into narrow rows by means of a marker, which is an implement like a wheel with the rim taken off, the places for the plants being marked in the soil by the ends of the spokes as the wheel is pushed along by means of a handle attached to an axle piece passing through the hub. For planting to seed the beds are prepared in the same way and the seed sown with a machine drill, which marks the rows, drops, covers and rolls the seed at one operation. A drill is a great seed sower by reason of its evenness and straight, thus assisting in cultivation throughout the season. Even for the average medium-size garden of a farm the combined drill of the best makes is a good investment.

The vast amount of manure applied on a place like the Rawson farm can hardly be realized by regular farmers. An acre or two sometimes gets as much as a whole farm might get in some sections. But the difference is partly due to the conditions. The market-garden soil is cultivated every year, and the vegetable matter is removed in large quantities every year. Not being able to spare the use of the land, the gardener cannot grow seed to be plowed under, but must depend wholly upon manure to furnish decayed vegetable mould. The farmer, by changing crops and seedling down every few years, can make a little manure go a long way toward crop production. Fortunately the gardener can buy all the city manure he needs and at very low rates.

The high manuring even without much rotation of crops or use of fresh land, no doubt, results in conditions far more favorable than those of farm land in general. The soil of the market gardens through the action of so much fermenting manure has become fine, soft and mellow. It can be worked early in the spring, does not bake easily and holds moisture well. Roots penetrate easily and plant growth is very rapid and vigorous. Vegetables are large and handsome, and also smooth and free from prongs and side roots, because in the soil packed full of plant food not many extra roots are needed to supply the plant. It is the condition and richness of the soil more than the skill of the grower that accounts for the high grade of products from suburban market gardens.

Large Tile for Wet Seasons.

That a thorough system of tile drainage is one of the most valuable improvements, all things considered, that the farmer can engage in, every one of experience is ready to admit. At the same time no branch of farm work is neglected to such an extent. Much of the work already accomplished in this direction by others has proved unprofitable and entirely unsatisfactory. Indeed, the writer has heard farmers of intelligence and long experience affirm that it was useless to depend upon tile drainage to save a planted crop in the depressions where it is most needed, following the almost incessant downpour of rain that has been experienced during the last two years in many localities.

drains are seen discharging water at their full capacity, have eventually found our crops seriously injured, if not utterly ruined, by excessive moisture, plainly demonstrating the serious mistake made in not using a tile of much larger dimensions. All this after the expense incurred in the labor of digging and carefully adjusting the grade of the ditch preparatory to laying the tile, etc. Let us bear in mind that this wet, unproductive land, when well underdrained, constitutes a portion of our farms earliest to be worked in the spring and that will best resist the severest drought. It is far the most productive, affording an earlier harvest than other parts of the farm, providing that we have, with wise forethought, planted tile of sufficient capacity to meet the demands of any emergency. To this end let us study the nature of the land designed for drainage, using tile of much larger capacity than ever before, especially where the overflow is inclined to collect and remain in the depressions. I have no use for the tile less than three inches in diameter (inside measurement) unless for laterals of few feet in length.

Of course the amount of fall available also has much to do in regulating the size of tile, least fall requiring the larger sizes. While it will be found in pursuing this course that the expense to some extent will be increased, let us not be pennywise and pound foolish by not conforming to the conditions required for thoroughly successful results.

IRVING D. COOK.

Genesee County, N. Y.

Among the Farmers.

It has paid me well to use commercial fertilizers for topdressing—a mixture of one thousand pounds fine ground bone, six hundred pounds muriate of potash, four hundred pounds of nitrate of soda; apply in spring, after the third crop, three hundred or four hundred pounds to the acre.—J. E. Putnam, Worcester County, Mass.

The manufacturers of also have started in on a campaign of education to teach the people to use and demand white butter and white oil, thus defeating the intent of the law passed, last year, and enabling them to put their goods upon the market without a fear of competition. We must meet this condition by building up a trade among those who appreciate pure food products, and are willing to pay for what they get.—C. D. Richardson, Franklin County, Mass.

Canada ashes are an excellent fertilizer for grass; about four hundred pounds to the acre; doubt if a farmer could afford to use chemicals for this purpose unless under favorable conditions.—E. D. Gibson, Worcester County, Mass.

As a labor-saving machine, the potato planter is without a rival. The grower must look well to the quality and condition of seed. After planting, cultivate at once. Smooth down the land with a plank drag, harrow and cross harrow, if necessary. Do not stay away from your field ten days or two weeks to do all the other jobs. Freedom from weeds and grass at this stage generally insures a crop. Market reports must be studied closely; avoid a crowded market, and whenever it is possible sell at shipping station in ear lots.—A. Chandler, Randolph, Me.

I intend to raise yellow corn, Hungarian and turnips, besides small fruits and a liberal garden for home use. I shall plow as soon as the ground is in proper condition, and harrow once a week, or oftener, until time to plant, which is the first of June for corn and Hungarian and the first of July for the turnips. The corn will be cultivated intensively until the first of July, when it will be seeded with grass seed and clover. Grass seed is also sown with the Hungarian. I consider Hungarian the best crop for the dairy, and turnips superior to ensilage for succulence.—S. A. Shaw, Androscoggin County, Me.

Potatoes from Sea-Weed.

I have a field of ten acres free from rocks and bushes, mostly flat land. In the fall I plow about one acre, plowing deep. During the winter I procure sea-weed, on which I plant potatoes, planting as early as the season will allow. I dig my potatoes the first of September, re-plant the land and spread with barn dressing, spreading five or six cords to the acre and harrowing it well in. On the low land I sow timothy, on the high land browntop and clover. In this way I get over the field once in ten years, and none of it gets run out. On the beds just laid down I get about two tons to the acre for the first three years. Kennebecport, Me. R. F. BENSON.

Kennebec Farming Notes.

The warm weather during March caused our farmers here to think that we were to have an early spring, and considerable plowing was done, and some early seeding, including the sowing of peas and planting a few early potatoes. But the cool weather of April caused a set-back, and perhaps it was for the best, as farming in Maine in March hardly ever amounts to much by way of crop production. Generally the middle of April is about early enough to secure a paying crop, as early started crops make poor returns in way of production. A few warm days in March do not insure an early spring by any means here in the Kennebec.

From present indications we judge that our farmers are laying out their plans for a large amount of labor upon their farms the coming season, and if help can be obtained, large areas will be devoted to field crops generally. The area of field corn, beans, potatoes and garden truck promises to be above the average. Large areas will be sown to oats and to mixed grain for feeding purposes. Corn meal and other feed have been so high for the past two years that

Hay Trade Firm and Active.

The situation remains satisfactory from shippers' and sellers' point of view, but in the different parts of the country the conditions vary more than recorded last week. Receipts at New England markets have increased considerably, so that the prices barely hold firm for lower grades, while in the markets centering in New York, including Jersey City and Brooklyn, prices have advanced to high figures, owing to the scarcity of supply. The highest figure quoted is \$23 at Jersey City and Brooklyn, which is the top record of the season. In the country over, choice and No. 1 hay is at a premium wherever offered. Under grades are still plenty and prices more or less regular.

At Boston the market is heavily supplied with low grades, and the best hay offered sells at \$17 to \$18 per ton, but this is a quality that would not be considered even No. 1 in ordinary seasons. Lower grades range down as low as \$9. Rye and oats straw are in fair supply and selling rather slowly.

At New York the demand is exceedingly active for the best lines of hay, but common lots still sell with difficulty at quotations. The total receipts for the week were 6480 tons, compared with 9030 for the corresponding week last year. Arrivals at Jersey City show decided decrease the past week, owing, it is said, to the bad condition of country roads, and the prices have been very high for top grades, buyers not being able to obtain all wanted at any price. The market is expected to remain firm throughout the week.

At Philadelphia low grades are plenty and dull, but the demand is firm for the best grades at steady prices. Western markets are reported steady and firm with stock on hand not large. Southern markets are firm and steady, and prices about the same as reported last week.

The following table shows the highest prices for hay in the markets mentioned, as quoted for the Hay Trade Journal: Boston \$19.50, New York \$21, Jersey City \$23, Philadelphia \$21.50, Brooklyn \$23, Buffalo \$17, Pittsburg \$19, Kansas City \$12.50, Minneapolis \$13.25, Baltimore \$20, Chicago \$15.50, St. Louis \$15.50, Montreal \$9.50, New Orleans \$20.50, Washington \$18.50.

Sharp Decline in Butter.

The usual tendency to lower prices for butter at about this time of year appears strongly in this week's quotations, local markets showing a decline of from one-half cent to two cents per pound, according to grade. The drop is owing solely to the increased receipts in all large dairy markets. The majority of dairy cows come fresh sometimes in the spring, and more milk and butter is the natural result. Pastures have been held back somewhat by recent cold weather, but in southern New England and New York many cattle have already been turned out. Soon the effect of pasture feed will be shown in still greater receipts and perhaps lower prices. The consuming markets will need to take care of shipments, however large they may be, since buyers for cold storage do not come into the market until June, and exporters do not buy the best grades. The greatest decline is noted in the higher grades of fresh-made creamery, since the greatest gain of receipts has been in these lines. Most lots of dairy show more or less decline in price, with not much demand for low grades.

Chapin & Adams: Prices are lower for the best grades, as usual at this time of year, fine creamery being firm at 25 cents. There is a prospect of still lower prices. The proportion of creamery over dairy butter seems to be increased year by year. Much of the farmer's butter finds a local market, but for shipment its value is so much below creamery that the farmers can hardly afford to make it, the price being 3 to 5 cents less per pound.

The market for cheese shows a moderate demand, with prices of a few grades fractionally lower than quoted last week. This is owing to the arrival of considerable new Wisconsin and New York cheese selling at 13 to 14 cents, according to quality, size and amount of purchase.

The New York market experienced the same decline noted at other great receiving points. A fair quotation is 25 cents for most top-grade sales, although some lots go a fraction higher, owing to extra quality. The drop in price has stimulated demand, and the market seems likely to hold firm so long as receipts do not suddenly increase. Receipts Wednesday were 7366 packages; a moderate amount for the season.

Dairy butter from nearby points is not in oversupply, and meets with fair demand at 22 to 24 cents, according to grade. Factory, renovated or other imitation goods seem to be in considerable request for certain classes of trade.

The week's feature of the New York cheese market has been the decline in all grades of skim goods, owing to large receipts, slow demand and the competition of fresh-made cheese of better grade. Full skims sell as low as 2 1/2 cents.

Top grades have not suffered in the least, best full-made, colored fair being in demand at 15 cents. New cheese, so far, is not of high quality, and dealers do not seem very anxious to take it at 13 cents, although exporters have been buying much of it to ship to British markets.

Receipts at Boston for the week were 608,911 pounds of butter, 2448 pounds of cheese and 49,709 cases of eggs, compared with receipts for the corresponding week last year of 500,000 pounds of butter, 1144 boxes of cheese and 35,542 cases of eggs. Receipts at New York for the week were 31,500 packages of butter, 11,076 packages of cheese, 125,500 cases of eggs, against 28,173 packages of butter, 8548 packages of cheese and 93,917 cases of eggs for the corresponding week last year.

Provisions Quiet.

Beef shows little change in price, demand being rather dull, with the quotation tending down rather than in the opposite direction. Beef arrivals for the week were heavier, being 108 cars for Boston and 111 cars for export, a total of 219 cars; preceding week, 167 cars for Boston and 79 cars for export, a total of 246 cars; same week a year ago, 133 cars for Boston and 53 cars for export, a total of 186 cars.

Mutton holds fairly steady for best quality, but spring lambs are in greater supply, and prices not fully maintained. Those not in good condition sell with difficulty. Veals are in good demand, but prices tend to weaken on account of the increasing supply, as is usual at this season. Veal buyers warn country shippers that veals should not be shipped wrapped in skins, or with the plucks inside the veals, but in separate packages.

Hogs and hog products are steady at last week's quotations. Boston packers have again made a still smaller kill of hogs. The total for the week was about 17,200, preceding week 18,700, same week a year ago 20,100. For export the demand has been

THE SOURCE OF GOOD BUTTER.
Daughters of King of St. Lambert's King. Property of F. W. Hart, Cleveland, O.
Frontispiece of booklet issued by The De Laval Separator Co., New York.

smaller, the total value by Boston packers having been about \$125,000, preceding week \$180,000, same week last year \$165,000. The record for the week reflects a moderate number of hogs marketed. Total Western packing 300,000, compared with 330,000 the preceding week and 330,000 two weeks ago, according to the Cincinnati Price Current. For corresponding time last year the number was 315,000 and two years ago 410,000. From March 1 the total is 2,000,000, against 2,370,000 a year ago—a decrease of 370,000.

Game is in fair supply and slow demand. Mallard ducks sell at \$1.25 to \$1.50 per pair, redhead ducks \$2.50 to \$3, widgeon \$1. Philadelphia squab are firm at \$3.50 to \$4 per dozen, with natives at \$3 to \$3.50, quail \$4 to \$4.50 per dozen, plover \$5 to \$6 per dozen. A few fresh plover are coming in and sell at \$4.50 to \$6 per dozen.

The poultry market shows no special change, receipts being light and prices steady. Live poultry is still scarce and prices fully maintained. Turkeys, ducks and geese do not cut much figure in the market at this season. Squabs are increasing in supply, but prices hold.

Shakespeare.

Something About the Men, Manners and Customs of His Time.
BY BENJAMIN F. STEVENS.

There was a day in the year 1580 or 1587 which all lovers of the good in nature should observe as a day of thanksgiving, or as a saint's day is kept in our mother church by the true believer. It is that on which Shakespeare left his native yet humble home on the banks of the Avon and strolled into the great world of London. Had this departure, a great event in the history of his age and of all time, not occurred, who may say now that we should have had any Shakespeare at all, for it takes but a very small circumstance, indeed, to change the destiny of any human being. This thought, perhaps not an original one, is worth pondering over, the moral of which the great poet answered himself in after years in "Hamlet," one of the noblest creations of his great genius:

"There's a divinity doth shape our ends,
Rough-hew them how we will."

Might it not have been that Shakespeare, in writing these lines, looked back upon his early days of struggling poverty, and then, in his mind's eye, forward to that career wherein he had earned fame and prosperity? Let us indeed hope it, or at least give him the benefit of that imagination which glows so warmly and wonderfully through his plays on all other subjects.

At twenty-four years of age Shakespeare is in London in a menial capacity—some say holding horses at the playhouse door for visitors; others that he was the call boy of the theatre; but his real position matters not; the world will, probably, never know more than it does today about it. In one way or another he falls among the players, where his real purpose of life begins. As in the country he found wisdom in the fields and brooks, customs and manners, so in the greatest city of the world he found that practical knowledge of humanity, its joys, its love and miseries, and all the other phases of life, in illustrations of which his works abound.

It is curious to observe what the old writers have to say about the manners and customs of Queen Elizabeth's time, and the dress and modes of living of the inhabitants of the metropolis. The Queen, who was possessed of an immense stock of vanity, set an example of profusion in dress, which was followed by all who could afford the means of doing so; and she was one who could never brook censure, no matter whence it came, for what she did concerning her personal decoration. Sir John Harrington relates in his quaint way that the Bishop of London once preached a sermon before Her Majesty, in which he touched upon the vanity of decking the body too finely, whereupon Elizabeth said to the ladies of the court, "that the bishop held more disgrace upon such matters she would fit him for heaven in a very short space of time. Stevens, commenting on a passage in "Cymbeline," where Imogen exclaims:

"Poor I am stale, a garment out of fashion,
And, for I am richer than to hang by the walls,
I must be ripped."

uses the following illustration: Clothes, in those days, were not kept in drawers, as at present, but hung up on wooden pegs in a room appropriated to the sole purpose of receiving them, and, while the richer ladies were ruffled for domestic purposes, such as mantles for infants, vests for children, etc., the articles of inferior quality were suffered to hang by the walls till age and moth had destroyed them rather than that servants and poor relations should wear them. When a boy he saw one of these repositories which had been preserved with superstitious reverence for almost a century and a half, in an old mansion in Suffolk, and he makes the startling assertion that when Queen Elizabeth died she was found to have left about three thousand dresses behind her. No wonder that luxury and vanity prevailed among the people where such an example of extravagance was before them in "good Queen Bess."

A prevailing fashion of dyeing or coloring the hair existed in Shakespeare's day, which he took many occasions in his plays to satirize. Benedick, in "Much Ado About Nothing," in speaking of the woman he would marry, says, "Her hair shall be of what color it please God." The reputation

of this fashion was even hurled from the pulpit, but nothing seemed to stop the practice. Out of compliment to the Queen the false hair, which was often obtained from the heads of children—altered to some lively place and robed of the beautiful locks—was colored of a sandy hue, or light red, Elizabeth's hair being decidedly on the brink of red. These "thatches," as Timon of Athens calls them, were known as periwigs. Thus Julia, in the "Two Gentlemen of Verona," looking at the picture of her rival, observes:

"Her hair is auburn, mine is perfect yellow;
If that be the difference in a love,
I'll get me such a colored periwig."

Flaming head-dresses were worn, with ribbons floating in the air like streamers, to which allusion is made in "The Merry Wives of Windsor." The ladies' morning cap was usually called a mob, and it retains its name to this day in parts of England, and perhaps elsewhere. The ruff which is seen in the portraits of Elizabeth was in common use by both men and women, and reached the most extravagant pitch of absurdity, more especially in the case of the latter. It extended behind to the very top of the head. Those of your readers who have seen a performance of "The Critic," that celebrated burlesque by Sheridan, can bear witness to the immensity of the ruffs of Lord Burleigh, Sir Walter Raleigh and Sir Christopher Hatton, which, however, were not in reality much burlesqued.

The waist of a lady's dress was unusually long, the bodice terminating at the front in a point, in which was a pocket for money, needlework, billets, etc., a fashion to which Shakespeare alludes in several instances. It is said that an Elizabethan dame, with her high ruff and gown of rich material, stuffed about the shoulders and over-hanging an immense, stiffly-starched petticoat or farthingale, giving her an enormous bulk, was a most formidable looking creature. Silk stockings were first worn by Elizabeth in 1560, over which were shoes with very high heels; the latter making the woman nearly as tall as the average man. Perfumes were used to an alarming extent on gloves, bracelets, necklaces and clothing. "Gloves as sweet as damask roses" were part of the stock of Antolova in the "Winter's Tale," and Mopsa tells the clown that he promised her "a pair of sweet gloves." It is easy to conjecture from these details what the feminine allurements of Shakespeare's day were.

Now, the dress of the men of that period was fully as extravagant in its way as that of the women, and their folly was satirized by our great poet and his contemporary writers. After the death of Elizabeth, her successor, James, encouraged these fantastic fashions. The beaus of his day were distinguished by his long and flowing hair waving in the wind, his hat of silk or beaver stock of Antolova in the "Winter's Tale," and Mopsa tells the clown that he promised her "a pair of sweet gloves." It is easy to conjecture from these details what the feminine allurements of Shakespeare's day were.

The men's doublet and hose were of enormous size, especially the breeches, which, by being puckered, stuffed and distended with woolen or other substances, attained a magnitude so preposterous that Strutt relates, on the authority of a MS. in the Harleian collection, that "there actually was a scaffold erected around the inside of the Parliament-house for the accommodation of such such persons as wore these huge breeches." During Elizabeth's reign this scaffold was taken down as the fashion began to be obnoxious. Then these breeches were reduced and made to fit the form, or at least shrunk in their bulk. Over all this attire was thrown a fine velvet or fur-faced cloak; but none under the rank of an earl was allowed to wear saffron, that, according to Malone, being in Shakespeare's time the richest dress worn by men in England. The hose, as stockings were called, were gartered externally below the knee, and were of quality according to the means of the wearer. Malvolio, in the "Twelfth Night," was made to appear cross-gartered before his mistress, which did offend her. This mode of presenting himself before a lady or her rank led to his being shut up as a madman. Everything worn as interior or exterior dress by the beaus of London was of the richest description, and to a great extent these extravagances were followed by the meaner as well as the better classes.

Swords and rapiers were worn so long that government interfered and passed a sumptuary law to limit the length of these weapons to three feet, together with one for the curtailment of ruffs. The interior of the houses of the gentry was decorated with handsome carvings, the beds covered with costly coverings of silk, some being lined with ermine, and everything done in ornamental profusion.

What more beautiful passage is there in Shakespeare's poetry than that in which he describes in "Cymbeline" the bed-chamber of Imogen? There is, or was, at Kenilworth, when the writer visited it, a most beautifully worked tapestry, of Elizabeth's day, on the side of the bed-chamber in which she slept when she paid her visits to the Earl of Leicester; but decay had taken hold of it, and parts were hanging in shreds. It was the custom in Shakespeare's time for each bed-chamber to be furnished with two beds, one standing high for the master; the other,

a truckle, or trundle-bed, so-called, which was on wheels and ran under the higher bed. Shakespeare alludes to this custom when the Host, "The Merry Wives of Windsor," is inquired of about Falstaff, and points and says: "There's his chamber, his house, his castle, his standing bed and his truckle-bed."

At the beginning of the sixteenth century, puer was so rare as to be hired by the year for noblemen's houses, and even during the reign of Elizabeth was a very costly material. Gremio, in "The Taming of the Shrew," alludes to it as one of the important articles of housekeeping in his city mansion. Before the invention of carpets the rooms were spread with rushes, even in the noblest mansions, and Shakespeare has many allusions to this old custom in words put in the mouths of Iachimo, Glendower and Romeo.

In 1563 knives were introduced; in 1611 came forks, until which latter period the old adage was put in practice, "Fingers were made before forks." The London dinners were not very simple matters, but consisted of three courses, all epicurean to the fullest extent. As to wine, Harrison, the historian, mentions fifty-six French wines and thirty-six Spanish and Italian ones, besides those made at home. Whether the celebrated beverage of Falstaff sack was a dry or sweet wine is undecided by the best commentators, but it is generally supposed to have been a sweet wine, what Shakespeare calls "a good sheris sack," a wine manufactured at Xeres, in Spain. But if this is so, why did Falstaff put sugar in his sack? unless, which is hardly to be believed, it was the custom to do so in Shakespeare's day with all wines.

Much more could be said about other modes of living in London in Elizabeth's day, when taverns and ordinaries were the customary and often riotous haunts for eating and drinking. Allusions to the pastimes of card playing and dancing, for which latter the queen had an especial fondness, could be made interesting; but all those matters appear to have been thought of by our great poet in all their completeness. Not a custom or practice or amusement of any kind escaped his marvellous genius; nothing was too slight for him to notice, and in the "History of the English People" Green says: "The young playwright, fresh from his own Stratford, his daisies pied and violets blue, flings himself into the midst of the brilliant England which gathered around Elizabeth, with the humors, the wit, the whims and the fantastic extravagance which veiled its inner nobleness. Country lad as he is, Shakespeare shows himself master of it all; he can exchange quip and repartee with the best; he is at home in their pedantic and affectations, their brag and their rhetoric, and their passion for the fantastic and marvellous. Especially have no dramas done so much for Shakespeare's enduring popularity with his countrymen as his historical plays. When the great Earl of Chatham was asked where he had read his English history, he answered, 'In the plays of Shakespeare.'"

"And so adieu, sweet Swan of Avon."

Literature.

Many co-operative and religious communities have sprung up in the Middle and Western States, and some have flourished unto the present day, while others have lived a short life and died out. Of such a village Mary Holland Kinkaid has written in her novel, "Walden." Giving it the name of Zanah, this author describes accurately a community which at present exists in one of our Western States. The story treats of the life of a young girl, Walden, who has been reared from early childhood in Zanah under the strict laws of the elders of the village, and it presents a most practical problem of life. Such a community of such religious beliefs as Zanah is said to possess takes the view of complete seclusion from the world which typifies the devil in all his allurements. It is the old monastic view, the shutting out of possibilities of temptation to gain reward in Heaven. Mary Holland Kinkaid shows by her story the training of the girl, Walden, for the office of prophetess. Walden's love for the stranger, Stephen Everett, who visits Zanah for a few days, then remains a month or more because of illness of Walden's father, whom he attends in his capacity of a physician, that temptation comes where man is, even if shut in by cloister walls and stern laws. In this religious community of Zanah men show jealousy, suspicion and distrust as much as men of the world, and then again there are good, self-sacrificing men and women in Zanah, but, on the whole, when the apple is denied it becomes more attractive, and so even Walden comes to find it in her heart, after all her years of the religious training which has been so strict, to put away the narrow life of Zanah and go forth with the man she loves, Stephen Everett, leaving behind another man who has watched over her as a father, but who has loved her as his "own fair love." It is the fool who guides Stephen Everett into the village of Zanah, and it is the fool, in company with Gerson Brandt, who bids him farewell with his trembling bride, Walden, at the hour of midnight. Zanah had cast out her Adam and Eve in a manner befitting her nature, stern and uncompromising. The characters are emphatically expressive, and the author has drawn her scenes with an appreciative and sympathetic manner. The setting of the plot, which is the village of Zanah, lends an originality to the love interest of the story

which is refreshing, as well as presenting conditions of life which renders the whole story of unusual interest. Life is much the same everywhere, for it has the needs of food, shelter and clothing, with companionship. The conditions attending the providing of these in this case furnish many an opportunity for the novelist to present peculiar personalities, but, on the whole, the author of "Walden" leans toward drawing her characters as beings out of the common mould, save for the effect the narrow life at Zanah has had upon them. Ambition shows here as elsewhere, and the epicurean can be recognized fully as easily. The story is narrated with a delicate touch. [New York: Harper & Bros. Price, \$1.50.]

One always looks for an enjoyable story from the pen of John Strange Winter, and a "Self-Made Countess" is no exception to the rule. "A Justification of a Husband" is the book's sub-title, and the truth of this line is evident in the closing chapters. A young girl, the youngest of a family of three marriageable girls and two sons, has for a mother an extremely bright woman, who loses her husband at a period preceding the coming of her eldest daughter, so she is left to manage the marrying-off of her girls. The first marriage is easily effected, and the bride seems quite pleased, for some day her husband will be rich, if never handsome. Possessing a vindictive nature she continues to be a thorn in her mother's side, because of the beauty of her next sister, while she herself has unfortunately been born plain. The second girl does not appear to succeed well, but she forms a love match with a poor but ambitious young man, and she develops ambitious desires for his advancement. She is not only ambitious for her lover, but for her youngest sister, who must make a good marriage also. When the latter succeeds in forming a love match with a count, which results in marriage, it seems as if the mother might rest in peace. The young countess enters her married life with the dislike of her mother-in-law, and soon learns that she is nobody after all. The bright, ambitious sister makes plain to the young countess that she must bring herself into notice by doing something, so the young girl plunges into charities, and nearly wears herself out, besides incurring her husband's displeasure, as well as his distrust. When at length she does strike on an idea she makes her position secure enough, as well as proving that her husband made a good choice in his selection of a companion. The author's chief attraction in all her stories is in her humaneness. She always sets forth essentially human people and human situations, deducting human traits. It is never some grand impossible tale that we read, but some bit of life which appeals, because many of us have been stirred by those same impulses or brought to stand by those identical forces. "A Self-Made Countess" is an exposition of society life which shows that there is a vast difference between being born to rank or wedded to it. Yet what a man or woman makes himself or herself the world sees, and upon that basis the world is eventually forced to judge one. [Philadelphia: J. B. Lippincott Company. Price, 50 cents.]

Popular Science.

Peat fuel in freight locomotives in Sweden has hauled the maximum load, the cost being about the same with English coal. To avoid the expense of an extra fireman, however, the peat is now mixed with an equal weight of coal, and the mixture has proven so satisfactory that it is to be tried on passenger trains.

Records are now being searched for notices of the rare, white water or phosphorescent fog, of the Indian Ocean and other seas. This appears as a weird haze, but proves to be a luminous mist, and it has been encountered as an ocean river a mile wide and as a broad area through which a vessel sailed fifty miles without touching the limits. One observer found the sea to the depth of a foot to be densely packed with luminous fishes an inch long, while at another time microscopic animals were observed in chains three inches long. The phenomenon has been seen before violent storms, and it has been suggested that some unusual atmospheric conditions may drive the luminous ocean animals in shoals to the surface.

Reptiles and amphibians are attracted to water through which a vessel sailed fifty miles without touching the limits. One observer found the sea to the depth of a foot to be densely packed with luminous fishes an inch long, while at another time microscopic animals were observed in chains three inches long. The phenomenon has been seen before violent storms, and it has been suggested that some unusual atmospheric conditions may drive the luminous ocean animals in shoals to the surface.

Some of the five hundred asteroids so laboriously found within the last century are to become lost. Prof. E. C. Pickering points out that sixty-eight of them have not been observed within five years, while about twenty-five have escaped notice for ten to thirty years, and as their orbits are but imperfectly known, there is risk when next seen these little planetary companions will not be recognized.

Comets shed a portion of their tails. Prof. Lewis Swift tells us, and as they have been doing this since creation, the probable result is a ring of nebulous matter surrounding the earth and possibly extending to Neptune's orbit. Reflection of sunlight from these cast-off tails of comets is Professor Swift's explanation of the zodiacal light. This light, which is just beginning to attract the serious attention of astronomers, is a faint glow seen in the west after sunset and in the east before sunrise, and it takes the form of a cone twenty-five degrees wide at the base, and often extending nearly to the zenith. While in some countries or places it is seen only in spring and autumn, in the west in the former season, and in the east in the latter, it is visible throughout the year from the Lowe Observatory in southern California. Even more mysterious is the Gegenschein, a faintly shining circle in the midnight sky exactly opposite the sun, and sometimes joined to the zodiacal cones by broad bands of scarcely perceptible light. While making his guess, Professor Swift doubts whether the cause of these phenomena will ever be proven.

The shape of the rudder of a vessel seems to be of more importance than has been generally supposed. Experiments in Scotland by J. Foster King indicate that the rectangular form has decided advantages, as it presents a larger surface at the load line under all conditions, and requires a smaller stock and working gear than curved shapes. With sufficient area, the narrow blade is as effective as the broad one, while it can be set more rapidly.

The Russian feat of reanimating the heart of a child that had been dead twenty hours is shown by Dr. R. Romme to be nothing new. The heart is not the delicate organ generally supposed, and for a long time physiologists have understood the possibility that it could be restored to action, the effect being of shorter duration in the human heart than that of lower animals. A current of arterial blood, or a solution of salt charged with oxygen, is a common means of restoring the beating dead heart. By massage, the exposed heart being rhythmically rubbed with the right hand, Professor Prus of Lemberg has succeeded in reanimating fifty-five hearts out of one hundred, and by combining massage with electricity M. Batelli of Geneva has revived dead dogs, and kept them alive as much as twenty-four hours. Human beings have been revived by the latter method, though only for a short time.

A dust fall of February has been traced over twenty-four counties in England, eight in Wales and one in Ireland, and it has been reported from numerous places on the Continent. The dust overcast the land like smoke, while near Southampton the cloud was so dense that a person could not see to read at noon. Like the falls of 1901 and 1902, the dust is supposed to be of desert origin, probably from northern Africa, and does not appear to be volcanic.

Two theories of taste and smell appear to be in favor. The vibration theory of Dr. W. Roux says, proposed about twenty years ago, is based on the popular theory of light and sound, and assumes that substances of medium molecular weight vibrate at a rate that affects the nerve cells, while the vibrations of substances having molecular weights below thirty are too rapid to give any impression and very heavy molecules move too slowly. The chemical theory is based on the old observation that odorous bodies are usually oxidized readily. It is confirmed by the latest discovery that the new gases krypton, xenon, with molecular weights near that of vanillin, are odorless, tasteless and inert, and further by the curious fact that the purification of these certain substances more stable and lessens their taste and odor. An English chemist points out that both theories are in accord, the nerves responding only to the agitation accompanying chemical change instead of being directly stimulated by the ordinary vibrations of the molecules.

The island of Krakatoa, on which all plant life was destroyed by the great eruption of 1883, is isolated from Java and Sumatra by twenty miles of water, and has given botanists a unique opportunity for studying the birth of a new vegetation. The first observations were made by Dr. Treub after about three years. Microscopic algae, which had covered the surface with a slimy layer, were decomposing the pumice stone, lava and ash into a suitable substratum for other plants, and about a dozen species of ferns were already abundant, while there were a few individuals of fifteen flowering plants. The report of other German botanists who visited the island in 1887 has just been published. Very strangely, no more species of ferns were noted; but the sixty-five species of vascular plants were observed, including fifty flowering plants representing twenty-one natural orders. There were eight Compositae, six grasses and four orchids. A belt near the water was the richest in species, while beyond the dense thickets of reeds and sugar-cane, and the more thinly covered interior contained chiefly ferns. It is almost certain that sixty per cent. of the flowering plants were introduced by the sea; while thirty-two per cent. were probably borne by the wind, the others having been possibly carried by birds.

Fluorine, the most active element known, has been isolated by M. Moissan in a state of absolute purity, and when free from moisture it is found to lose entirely its extraordinary power of attacking glass. Pure fluorine, therefore, may be sealed in a glass tube. In collaboration with Professor Dewar, the tube of gas was immersed in liquid hydrogen, when the liquefaction and solidification of the fluorine were observed, the fusing point was found to be at 23°C. below zero. As most substances are known to become inert at such cold, the question has arisen whether all chemical reactions cease near absolute zero. To test this, the tube of fluorine was broken in the liquid hydrogen, and the result was a violent explosion, with much flame and a shattering of the apparatus employed. It has been thus proven that some chemical action is possible at about minus 250°, or only twenty degrees above the absolute zero.

The airship now being built by Dr. F. A. Barton is to be a combination of the balloon with the aeroplane machine. If this is successful, the purpose is to construct a building similar apparatus, gradually increasing the size of the aeroplanes and the motive power, but diminishing the proportions of the balloon, until the practical commercial airship is evolved. The perfected airship should have an independent speed of sixty to eighty miles an hour.

An electrical test, at first proposed as a means of determining whether life is extinct, has been used to show when life begins. No reaction is produced if the matter is lifeless. Applying this method to hen's eggs, Augustus Waller has found that signs of life appear in twenty-four to sixty-two hours after the beginning of incubation, and that only when development fails or is arrested does the reaction continue to be absent. Glaciers are supposed to increase and decrease in cycles more regular. An inquiry by M. Charles Rabot shows that the stages are not simultaneously reached in different parts of the world, and that in Norway, where the cycle is some two centuries long, the last general increase began in 1700 and the decrease is still in progress.

Gems of Thought.

For whoever would be fairer, illumination must begin in the soul. The face catches the glow only from that side.—William C. Gannett.

What if we must bear a burden?

Have not others burdens, too? Look about you, then, and be thankful.

That your burdens are few.—Eva Williams Malone.

The world owes no man a living, but every man owes the world a service. Opportunities for the full exercise of gifts, powers, physical, mental and spiritual are given, and the man who does not use them is a failure.

God commands us to work in the ways which he indicates in his providence, and the one who does not follow these directions will be blind in basket and in store and leave a blessing along his pathway.

Be courteous to all, but intimate with few, and let those few be well tried before you give them your confidence.—Washington.

It so falls out.

That what we have we prize not to the worth Whiles we enjoy it; but being lack'd an' lost, Then we begin to lament the form of it, And sigh and say, 'This was my own.'

The virtue that possession would not show us.

Whilst it was ours.—Shakespeare.

Some parrots talk a great deal, but intelligent people do not go to them for information.

Albert Waterhouse.

To put up with the heavens and the earth, and to be a miracle in authorship.—Joseph Parker.

Tact is better than talent.

With Christ the vessel I smile at the storm.—John Newton.

Let it be our happiness this day to add to the happiness of those around us, to comfort some sorrow, to relieve some want, to add strength to our neighbor's weakness.

Declare yourself for Jesus Christ, and his yoke of service, reciprocate the love of God in the Crucified Redeemer, join yourself to the Cross and its transforming Blood; then be true to Him, true to the cross, to your neighbor, do not violate yourself. Do not shatter your ideal. Take your vow, vow to love God, to love your neighbor, then pay it all the time, pay it the way, pay it best you can, and trust that.

Rev. F. W. Lockwood.

It is better to do with less than you can than to want more than you need.

An arm of aid to the weak.

A friendly hand to the friendless.

Kind words, so short to speak.

But whose echo is endless!

The world is wide—these things are small.

They may be nothing, but they are all the more.

Every true man or woman is a conductor of that mysterious life-giving power of truth, which we know as the Holy Spirit, because it comes to make holy spirits of us.—Charles G. Peabody.

Faith is what you're taken.

Character is what you give.

When to this truth you wake,

Then you begin to live.

—Raymond Taylor.

It is just as athletic a performance to wrestle with the principles of the darkness of this world as to wrestle with a champion. It needs just as rigorous a training, to pull against circumstances as to pull against time. It requires not unreasonable that the supreme object of an immortal soul should have from a just and most attention and development as a man gives to his legs or his muscle or mind.—Francis G. Peabody.

What a man puts first in his life tells where he stands. We know his character by the things he loves.



The Saturday Evening Post

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Poultry.

Summer Care and Feeding.

Neighbor Hennman and I dropped in one day to see how Ed Sloom's chickens were thriving.

"Never had 'em do so well," said that gentleman. "No more late chickens for me, early ones are better and live better, even if the weather is bad in the spring, and by raising them early, the breeder's part of the work is done before hatching and hatching begins."

"Yes," agreed Hennman, "and I have noticed that early chickens seem more vigorous than those that come before the strength of the flock is lessened by two or three months of hard and steady laying, and they do their best when worms are plenty and before hot weather begins."

"I give 'em all my skim milk now," continued Sloom; "that pays better than feeding it to the pigs; makes the chickens grow." "The experiment stations find," I added, "that chickens grow half as fast again when they are fed plenty of meat or milk. I keep dry meat scraps or skim milk in the coop and let them help themselves."

"I suppose it pays to raise them right or not at all," said Sloom, "but it seems to be quite a chore to raise 'em early and have 'em right."

"Only for a few weeks," responded Hennman; "get all you need hatched as near together as you can, not strung out all through the summer. Then when they get well feathered out, let them run free at least half the day. As soon as the hay is cut, let them run over the stubble and catch grasshoppers. You'll find your March or April chicks won't cost you much more than the late ones, but they will pay you two or three times as much net profit."

"Speaking of experiments," said I, "it has been shown that milk and meat sometimes make pullets begin laying a month earlier."

"I can believe it," said Sloom, "and if that's so, it is a good investment, besides putting more weight into the cockerels. I wish there was some way to break up sitters," he continued. "The peckers think! There's one now, that one outside the coop, trying to hatch a stone or a piece of sod."

"It's just like a fever," said Hennman. "It is not an obstinate trick to be punished for, but more a condition to be treated. Keep in a cool, open coop in the shade with plenty of water and plain, cooling food like bran and oats. I could never see that stinking cockerel in with them broke them any more quickly. Two days to a week will cure them if taken in hand the first day they try to sit. How are the hens laying?"

"Pretty well, but I lost some of them. Fed all of tankage from a fertilizer factory and killed a dozen."

"Pays to buy standard goods," said Hennman. "Ground meat or bone is really cheap for the amount of egg food in it, but why not make a bigger yard and let the hens hunt part of their own meat and grass? You would not keep your cows all summer in a little pen. For her weight a hen eats nearly as much grass as a cow. One hundred hens weighing, say, five hundred pounds, will keep down an acre of grass land. They don't need your best land, but such as you use for cow pasture."

"I suppose so, but it always seemed like wasting land to give it to hens. Now, if I should fence off half my orchard for hens it might be a good scheme."

"Just rate," agreed Hennman, "if you keep them out while the good fruit is on the ground. I never can understand why a farmer will let his hens go without grass and sweets when there is too much of both in the orchard for the good of the trees. The shade is good for the hens and the manure is good for the trees."

"That is the matter with my chickens in the cooler house?" interrupted Sloom. "I say good look with hens in this, but these chickens have been dying fast, and are dropping now. When they are gone, dropping long they are as good as gone, aren't they?"

"A good enough house," observed Hennman, "but they have been there too long, mostly of six weeks old. They won't do so well indoors after the first three weeks. No matter if the weather is bad, and the driest place you can, with grass and gravel, put the hen in a coop with a good nest and let the chickens run."

"I say rats and take 'em some," objected Sloom.

"I say wire run," said Hennman, sketching a plan on a sheet of his pocket diary, "make it four feet square, the sides of one foot high, inch-square mesh netting, and the top of two-inch mesh. Make the frame of old 2x2 inch joists. Fasten on the netting with staples and have a six-inch frame at one side as a door to the coop."

"What is the coop?"

"Oh, just a box with the top covered with building paper which is painted thoroughly

with cheap oil, paint thinned with kerosene for economy. The front is of wire screen mesh as used for coal sifters, rat-proof. Daytimes this screen frame is raised a couple of inches to let the chickens run into the run, but shut it at night, and put a board shutter in front of the brooder.

"I had been looking into the brooder. I took off the top and brought it to the door. 'No wonder your chicks doop. Look at the lice running over the cloth and jammed into the crevices of the top boards. They must have a picnic with your birds at night. If you dust your chicks with insect powder, and rub it in and on top of the head you will find lice on them as well. The powder will bring them to sight and kill them, too.'"

"Well!" cried Sloom. "So early in the season, too. This house has been used for fowls the past dozen years. It must be full of nits, and the brooder heat started them out early. What shall I do?"

"Probably you can soak 'em all out with kerosene," replied Hennman. "Better clean the house, too, and keep the brooder clean. Lice can't live long in a clean, dry place. Give the chicks a box of dust and sifted coal ashes in front of the window and they will do the rest."

"Anything else needed to save the chicks?"

"Not much, now that they can find grass and gravel and insects outside. Feed fine mixed grain in the gravel and let them scratch for a living."

"I didn't suppose they needed much but dough and a dish of water."

"Oh, yes; they will pick up finely pounded grit and will struggle over a lettuce leaf almost as soon as they can run. As for meat, that is half their food in a state of nature. The closer you shut them up, the more need to look after all these points."

Massachusetts. G. B. FISKE.

Egg Market Firm and Active.

Changes have been slight in prices of eggs since last quoted. Receipts have been large and increasing, but the active demand, including large purchases for cold storage, has kept prices steady, a fractional advance being noted in a few grades.

The method of handling the enormous shipment at this season is of general interest. "Many eggs broken in handling? You would be surprised to know how few," said a New York commission merchant to the representative of a morning newspaper.

"The egg is a fragile thing? Certainly it is, but as a matter of fact the breakage of eggs in transit and in handling is extremely small, really next to nothing."

"The commercial egg package almost universally used throughout the country, at the present time, is a case containing thirty dozen. There were received in New York last year 2,800,000 cases of eggs; multiply that by 30, the number of eggs to a case, if you care to know the total number of eggs."

"Packed in cases and cartons, about four hundred cases to the car, that the eggs brought to New York last year made up of seven thousand cartons, equal to 140 old solid trains of eggs of fifty cars each. Are there solid egg trains? Not many, but this for the reason that the eggs are gathered originally from many and widely scattered points; but solid cars of eggs and bunches of cars are common, frequent, everyday shipments."

And, packed as they are nowadays, eggs for this market come from everywhere, ponding over a thousand, fifteen hundred, two thousand miles of railroad from as far north and west as North Dakota, and from as far south and west as Texas, with scarcely any breakage worth mentioning.

"As a matter of fact there were not a very great many eggs broken in shipping and handling even when eggs were shipped in barrels, packed in chopped straw, as eggs commonly were up to fifteen years ago. You must think that, packed in that manner, the eggs would shuck about and smash against one another and so get broken, but they didn't; but being comparatively a heavy and bulky package the barrel got, naturally, more heavy jolts and jars in handling than a lighter package would, and more eggs were broken in it than that way."

But with the modern egg case, giving not only security in the package itself, but making a package that can be easily conveyed and safely handled, the breakage in eggs is reduced to a very small matter indeed.

"In the bottom of the egg case is spread a thin layer of excelsior, over which is laid a sheet of cardboard, upon that being set a rack of cardboard pockets, each pocket a holder for one egg. On that first layer of eggs is laid another sheet of cardboard and on that another rack of pockets, and so the case is filled, the top layer of eggs being covered with a final sheet of cardboard, while a layer of excelsior is placed on that and on that the cover of the box, which is packed just tight enough to keep the eggs from moving."

"The egg case is made of whitewood, of thin, light stuff, but it serves its purpose well, and the strengthening strips nailed across the ends serve admirably as handles."

"Thus packed these thin, light cases filled with eggs are stacked up in cars and carried long distances and hauled about on trucks and handled in and out of warehouses, and anything does happen to eggs in transit or handling, it is likely to be in the nature of an accident, such as might happen to anything. For instance, a case of eggs might work out from under the rope around a truck load, or a case of eggs might fall out of a wagon, or an axle might break and let a load of eggs drop."

"Ever hear of a carload of eggs in a collision? Oh, yes; freight trains with egg cars in them are, of course, just as liable to collision as any other, and if you should run into a carload of eggs hard enough there wouldn't be much of anything left but egg nog. But as I said, these are mishaps that might happen to any sort of freight, and the fact remains that in the transit and handling of eggs, fragile as they are, the loss is astonishingly small; they might handle millions of eggs in and out of store and never break one."

Story of an Egg.

If a fertile egg has been incubating for even twenty-four hours, a small speck is visible, but it is not discernible in thick or dark-shelled eggs; but if the egg were broken open, it would be perceived that the vesicle had enlarged, and radiating from it would be a number of minute blood-vessels.

On the third day these blood-vessels will have completely surrounded the yolk, and the small dark spot in the centre will have developed into the eye or brain. The brain is the first part to take definite form.

On or about the fourth day a respiratory membrane is formed, and the egg gradually increases in opacity until after the seventh day it is not practicable to form any judgment of the progress of the chick by means of light.

By the tenth day the bones of the skeleton



HEAVY MILKING SHORTHORN COW, BELLE
See descriptive article.

have begun to assume consistency, the internal organs have a decided shape, the heart is formed, and all vital parts are complete. On certain parts feathers are growing, and all development from hence is rapidly carried on.

On the twelfth day heat is given out, and this is easily demonstrated to those who use incubators, as less heat is required to keep up the temperature, and it is generally necessary to move back the weight.

The chick reaches its perfect form on the fifteenth day, and from thence grows in size, until, on the nineteenth day, respiration through the lungs takes place.

Up to within a few hours of the exit of the chick from the shell, the egg bug lies outside the bird. Immediately before hatching it is absorbed into the intestines, and forms sufficient sustenance for the chick for twenty-four hours. Therefore, people should avoid attempting to cram the little birds until this time has passed, when, if they are healthy, they will help themselves readily enough.

If all has gone well the eggs will begin to chip not later than the twentieth day, and the chick leaves the shell unassisted in from twelve to eighteen hours from after the first appearance of the bill.

Horticultural.

Sowing More Clover.

On farms where a short rotation of crops is practiced and the land is in grass for three or four years only at a time, with the increased cultivation and fertilization that is given, it should hardly be possible for the crop of grass or hay to diminish very much in amount. This is one of the advantages of a short rotation, heavier yields of hay and of better quality.

To make this result more sure, there should be plenty of clover sown, as this plant will make the best kind of hay for the cows to be fed along with the ensilage. We use the common red and alsike clovers. The alsike is the most reliable, as it is not so apt to winter-kill as the other.

Along with these there should be a certain amount of timothy to take the place of the clover as it fails. We like a mixture of the clovers and timothy cut early for the cows and young stock.

Clear red clover is difficult to cure alone, but along with the alsike the work is much more easily done, and the quality of the hay is superior. As we are probably farmers, grow alfalfa here, we must make the most possible out of the clovers adapted to our climate, and they are not very bad substitutes either.

E. R. TOWLE.
Franklin County, Vt.

Grain Markets Firm, Feeds Low.

The price of wheat has fluctuated considerably during the week, owing mainly to influence of Chicago speculators, but the net result shows merely a slight advance over last quotations. This rise is in a measure justified by somewhat unfavorable crop reports from France and Germany, and by the active export demand.

The price of flour has also been variable, and this condition of the market has tended to check legitimate buyers who prefer to trade when prices are steady and dependable.

Wheat has tended upward, owing to light receipts, but the use has not touched the price of bag meal, which has reached the lowest point for a long time in New York and Boston. Bran, cottonseed and most other feeds have sold a little lower than quoted last week. Many dealers claim that meal and feeds have touched bottom for the season.

Grain seems to have wintered well in most parts of Europe. In Russia the crop will be uneven, promising great abundance as a whole, but showing failure to the famine point in certain districts. In Finland the situation is still serious, bread being very scarce and poor and fodder also. A single parish reports that five thousand persons are absolutely destitute, subsisting solely on what is called "hunger bread."

Since October meat, milk and potatoes have been utterly lacking throughout the famine area. In the Kaspian and Ussuriysk districts at least one hundred thousand persons are wholly dependent on relief. Half the cattle are dead, and reports of the deaths of human beings are persistent. It is stated that the worst stage of the famine will come when the spring thaws render the sufferers inaccessible. The American contributions, amounting to \$125,000, are believed to have averted a large mortality.

Some recent reports from both France and Germany have spoken rather unfavorably of the wheat prospects, more or less of the fall-sown crop having been so damaged that it must be plowed up. During the last few days Germany and central Europe have been visited by an unreasonable severe snowstorm, which is likely to cause injury to farming interests. In other parts of Europe the outlook is considered good. In Australia the rain has been abundant, and the country is recovering slowly from last season's great drought. The grain-growing countries of South America have larger corn and wheat crops than in 1902, and Argentina will export a large surplus. Chili will have some for export. Northern Africa and India report good prospects for grain.

Grain shipments last week aggregated but 282,043 bushels, of which 178,879 bushels were wheat and 103,164 bushels corn. The sailings with their allotments were: Steamers Pandosia, for Lisbon, 178,879 bushels of wheat; Philadelphia, London, 18,921 bushels of corn; Georgian, Manchester, 68,000 bushels of corn, and Saeben, Liverpool, 17,143 bushels of corn. The cargo taken out by the Pandosia was the only

Spring Crop Conditions.

Following is the report of the United States Department of Agriculture, climate and crop bulletin of the weather bureau, New England section, for the week ending Monday, April 20:

So far as their fitness for preparation of the soil and the growth of grass and fall-sown grain are concerned, the months of March and April should have exchanged places. The winter snows had lain upon the ground in which there was less than the usual amount of frost, so that after their melting by the abnormally warm weather of March the ground was soon in condition to work; grass started ahead wonderfully and grain showed up well; buds of all kinds began to swell, and there was every promise of an early spring.

Although the April temperatures have not departed far from the normal, still the month so far is considered too wet and cool, so that progress has been slow. In Aroostook County, Me., snow has but just left the ground, and in the three northern States the ground is generally too wet and cold to work, although some few peas have been planted in favored spots. In the three southern States more work has been done and some early peas are up, but, on the whole, little planting has been done. Vegetables, under glass, are suffering from lack of sunshine. It is impossible at this date to determine the amount of damage done to fruit buds by the spring frosts. It is generally conceded, however, that the freeze of last December destroyed all hopes of anything like a half crop of peaches, and it is feared that still further injury has resulted this spring: other fruits are apparently in good condition. Although practically at a standstill for the past two weeks, grass and pastures are looking well, and some cattle are turned out in the south.

The cranberry growers on the Cape are so well pleased with the results of last season's work that it is reported that many new bogs will be built this year; the additional area in Plymouth County alone is estimated to be one thousand acres.

Early work in connection with the tobacco crop is well under way, with a prospect of a larger acreage than that of last year, especially of that grown under cloth. It is thought that the co-operative plan that is being adopted by the growers of the Housatonic and Connecticut valleys will give an added impetus to this industry.

Although April has been in a manner unfavorable, still the opinion of the majority of the crop correspondents is that the season is from ten days to two weeks in advance of the average.

Increase of Bean Supplies.

Within the past few years there has been a considerable increase in the production of beans in Michigan. The yield in that State has gained threefold since 1897. One result has been the unexpected weakness of the Eastern bean markets since midwinter when the price took a decided fall and has not fully recovered. In view of the short crop in New York State, it was thought that the situation would hold strong. The Michigan crop was only three-fifths of a yield per acre, but the area planted was large.

According to a recently published report of the State Secretary of State the Michigan crop in 1901 amounted to 4,639,398 bushels, an increase of 1,626,932 bushels over the crop of 1900 and of 3,000,560 bushels over the short crop of 1899. According to the reports of the United States Census the entire crop of the United States in 1899 amounted to 5,064,490 bushels, or only 425,092 bushels larger than that produced two years later by Michigan alone.

The value of the bean crop of Michigan in 1901 in the farmer's home markets is put by the above-mentioned officials at \$9,300,000, a contribution to the State's wealth only \$700,000 short of that of the wheat crop of the State for the same year.

Good Trade in Vegetables.

Shipments to Boston market have been large in nearly all lines, but the general level of prices is maintained, and dealers report an improved demand since Easter.

Potatoes have been in liberal receipt, but prices are practically unchanged. A good deal of Western stock is on the market and selling slowly at prices considerably below best Maine and New York lots. Not many potatoes from nearby points reach Boston market, growers preferring to sell in local markets, thus saving freight and commission and often obtaining retail or jobbing prices. The general level of smaller markets, however, follows quite closely the changes in New York and Boston potato markets.

Onions are now doing a little better, much of the stock having been cleaned up during the recent glut, but quotations are still low. Bermudas and Egyptians are more plenty. The bean market is dull, with a drop in price of yellow beans, and other lines barely steady at previous quotations. Old vegetables hold at previous rates, but parsnips are higher.

Rhubarb is in ample supply and prices tend downward. Dealers much prefer the native-grown product, as shipments from West and South are not only inferior in size, appearance and condition, but often in quality also, as a little heating during transit will quickly cause ferment and change of flavor. There appears no reason why local growers of the cold-frame crop should be discouraged over distant competition, and growers themselves appear to take this view, judging from new planting of rhubarb

this spring in several large market gardens of the Boston district. The collar-grown rhubarb does not seem to be competing to the extent once predicted by its friends. Dealers so far not being pleased with its quality and selling power.

Hot-house stuff holds fairly well in price, the cold, cloudy weather tending to reduce the supply. Hot-house tomatoes are plenty and lower. Shipments of cucumbers from the large Arlington greenhouses are increasing. Spinach is in light supply and has been rather high, likewise native dandelions.

Southern truck is in moderate supply. Peas now arrive from Charleston district and are lower and more plenty. It is thought by dealers that the cold weather and hailstorm in the South the first part of this week will lessen shipments of some lines, especially strawberries, which have been plenty and cheap of late.

Pure Maple Syrup Scarce and High.

V. I. Spear of the sugar producers' association states that the maple product throughout the State is only twenty-five per cent. of the usual quantity and of a very inferior quality. The managers of the Vermont sugar market have a large number of orders in, and have had to notify their customers that the quality cannot be maintained this year. Instead of cancelling their orders, however, the purchasers express a willingness to take what they can get. The market had counted on doing a business of \$30,000 or \$40,000 this year, but on account of the poor season will be closed about the first of May, and remain so until another spring. As the crop in Ohio and other producing States is also nearly a failure, the prices of pure sugar and syrup ought to hold very firm.

To eye strain, usually unsuspected, Dr. George M. Gould attributes much of human misery. He finds evidence that it was indirectly responsible for the opium habit of De Quincey, caused the morbid cognition and breakdowns of Carlyle, and gave Browning his headaches and vertigo. Printing books in white ink on black paper is a suggested means for lessening eye strain.

Great herds of elk are starving in Wyoming. It is proposed to raise money to supply them with food. Great numbers of human beings are starving in northern Sweden and in Finland, among them hosts of helpless little children. Should they not be cared for humanely before the hungry elk are fed?

The joint fair of the State and Rutland County agricultural societies will be held at Rutland, Vt., on Sept. 8, 9, 10 and 11.

The Sharon Biological Observatory, a summer school for teachers at Sharon, Mass., will experiment in forestry on a tract of 300 acres of woodland which it purposes making into a forest. Applications have been made to the United States Bureau of Forestry for a working plan.

The School of Practical Agriculture and Horticulture at Foughepssee, N. Y., recently received the morbid cognition and breakdowns of Carlyle, and gave Browning his headaches and vertigo. Printing books in white ink on black paper is a suggested means for lessening eye strain.

The trustees of the Doylestown Farm School have decided to purchase a tract of land as an addition to the farm, at a cost of \$5000. The Pennsylvania legislature has appropriated \$15,000 toward the maintenance of the school.

Y. I. Spear, cattle commissioner, was busy last week attending the testing and slaughtering of cattle in Brookfield. A. C. Abbott of Brookfield Centre had forty-two cattle subjected to the tuberculin test, thirty-four of the animals were condemned and killed. This is the largest slaughter of cattle in this vicinity for some time. Mr. Abbott will be allowed eighty per cent. of the appraised value for his stock.

It is claimed that the largest ginseeng garden in America is located in the hills of south-west Missouri. The Ozark Company of Joplin alone produces annually a \$30,000 crop of ginseeng from a three-acre farm. There is talk of organizing all the American ginseeng farms into a trust or other close form of association.

During the recent session, the legislature of New Hampshire has reversed the policy of caring for the indigent insane at the county farms and transferring them gradually to the State hospital, for which a handsome sum was appropriated. It has also provided well for the support and improvement of the school for feeble-minded children at Laconia and for the industrial school at Manchester. A measure, the effect of which will be watched with interest, was the change in the liquor law.

A bill passed by the New York State Senate makes the open season for deer from Aug. 31 to Nov. 10, instead of Nov. 15, and also provides that no person shall take more than one deer in an open season. The law formerly permitted the taking of two deer.

G. M. Odium, a graduate of the Michigan Agricultural College in 1900, now farm manager of the Methodist Episcopal Estate, Umatilla, Rhodesia, is in this country to study the farm machinery in use on large ranches in our Western States, with a view of purchasing and exporting suitable steam-powered plows and other implements for use on the estate in his charge. This estate contains about 13,000 acres, and, while not officially connected with the agricultural department of Rhodesia, a small area is being used by Mr. Odium for demonstration experiments with cereals, legumes, forest trees,

and in irrigation, under the auspices of that department.

The Maine Experiment Station is now mailing Bulletin No. 80 inspection of fertilizers. The bulletin contains the analyses of the samples of fertilizers received from manufacturers, guaranteed by them to represent the goods to be placed upon the market this season. Only the brands mentioned in the bulletin are thus far licensed. These are of especial importance to dealers, as they are liable if they sell or offer for sale unlicensed brands. Bulletin 80 will be sent free to all residents of Maine who apply to the Agricultural Experiment Station, Orono, Me. In writing, please mention this paper.

The quantity of honey produced in Ireland in 1901 amounted to 718,218 pounds, or nearly double the average quantity for the preceding ten years. Of this total, 128,335 pounds were produced in Leitrim, 508,067 pounds in Munster, 197,737 pounds in Ulster and 124,000 pounds in Connaught.

An international conference of sheep breeders, under the auspices of the British National Sheep Breeders Association, will take place in London, at the Guildhall, on Saturday, June 20. The chief subject for discussion will be "Pedigree in Relation to the Production of Wool and Mutton throughout the World."

During the recent session of the New Hampshire legislature a start was made in the line of highway improvement, forest preservation and the fish and game interests were carefully considered. The toll bridge bill was reported by the governor. So many appropriations were made that the expenses of the State for the next two years will total about \$1,300,000.

The bill recently passed by the Connecticut House of Representatives provides that every town having a valuation of less than \$500,000 may annually receive from the treasurer of the State a sum which will enable the town to annually expend for the support of public schools \$25 for each child in average attendance, previous to the payment of principal or interest on indebtedness, the expense of new buildings, etc., shall not be included in obtaining the cost of each scholar in average attendance, and that the State aid shall be expended only for teaching.

The severe snowstorm which ravaged Germany and northern Europe, April 20, reduced temperature to freezing point and below, and was accompanied by a gale which caused much damage to buildings and shipping.

Inquiry of the Connecticut Valley Orchard Company elicited the information that very little recent damage has been done the peach buds. The peach, apple, plum and pear blossoms in blossom the damage would have been great. The fruit growers are all confident that the yield will be a fair one, providing there are no further frosts or severe wind storms in May.

Governor Bachelder, secretary of the New Hampshire Old Home Week Association, has issued a circular announcing that the annual meeting of the association has been called for April 28, and marks the beginning of the Old Home Week campaign of 1903. He says the eminent success of this movement in four previous years is a guarantee of its success this year if the proper effort is made. The State association has designated the third Saturday of August each year as the first day of Old Home Week, making the observance this year Aug. 15-21, inclusive.

The Department of Agriculture has issued a comparative statement of the wheat crop of the world, showing that the total of 1,234,422,000 bushels in 1902 was distributed as follows: North America, 781,190,000; South America, 75,884,000; Europe, 1,738,933,000; Asia, 376,423,000; Africa, 48,000,000; Australasia, 43,927,000. The crop in the United States was 670,930,000.

A press dispatch from London says: Wool prices are firm, fine-haired merinos are in fair inquiry, but holders are asking extreme rates. Fine crossbreds are steady. The arrivals of wool for the third series of auction sales amount to 216,700 bales, including 84,000 forwarded direct to spinners. The imports during the week were: New South Wales, 10,161 bales; Queensland, 32; Victoria, 60; New Zealand, 13,575; Cape of Good Hope and Natal, 1754; elsewhere, 412.

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MASSACHUSETTS PLOUGHMAN

TELEPHONE NO. 3707, MAIN.

Roxbury has the first row of the baseball season and with enough of a combination of brute force and cowardice to make the rest of us hope that the first will be the last.

After a few seasons of experiencing the fascination of Horse Show toilettes, it must be a very steady exhibition equine who doesn't feel an ambition to go to Paris.

We are not surprised at the prediction that Mayor Fleischmann of Cincinnati is coming into world political prominence. The name has a rising sound.

And so Mr. Sothern can write a play now and then himself. Here is a discouragement for the band of school teachers recently reported to be preparing plays for him.

When a man has made a good name for himself in prison, it should at least serve as an excellent reason for the free people to help him maintain it after he has been released.

We have not noticed that any of the railroads are offering excursion rates to servant girls during the period that Mr. Farson of Chicago is engaged in selecting his ideal domestic.

The latest bank robber seems to be another victim of too much cheap literature. His tears after his capture are further proof of the theory that real bank robbers are born, not made.

Our American ice-man who has inherited some \$6000 is reported to have planned a joyous immediate expenditure of \$700 of it in drinks and dinners, after which he will return to his ice-wagon. The incident disproves the current belief that all ice-men are in a position to command indefinite drinks and dinners from their ordinary income.

Thoughtful observers have long considered that the safest place to conceal a doorway was not under the door-mat. Now that the fallacy has been well advertised at the expense of the Maiden family who trusted too blithely in such concealment, the number of those who conceal the key by reaching up and placing it over the door will probably be greatly augmented.

Immigration is surpassing all records. Nearly ninety-two thousand people arrived in March; a number fully sufficient to populate a good-sized city like Lowell or Albany, or to people a score of thriving towns. The quality is, on the whole, fairly good, with few aged or defective persons and a good proportion arriving from the thrifty, intelligent nations of northern Europe.

Some of the real estate agents employ methods which are misleading, if not positively dishonest. Those who place farm property into the hands of dealers to be sold should be sure that the agreement strictly states and limits the amount to be paid for services or advertising whether or not a sale is made. Some agreements are so loosely drawn as to leave the owner at the agent's mercy.

Still says the Bible with rumors, possibilities, reportorial investigations and friendship's own garland of timely hints concerning the approaching or not approaching Vanderbilt-Rutherford nuptials. Of course those who don't care for that sort of thing may skip; but we are forcibly reminded of the problem that must often confront the woman who says that she always gives her children the part of the newspaper that isn't any crime in it.

The point that seems to have been overlooked in the account of Mr. Mansfield's narrowly escaped kidnapping at the hands of the Bradleys is that there was apparently no reason whatever to expect that the Bradleys wouldn't be. Even so the individual super hero receives so large a stipend for one performance as to lead much verisimilitude to the anxieties of the undergraduate Romans. Nor does their reported difficulty in deciding which act was the third reflect much glory on the Bradley method of teaching English literature.

The success of the most transparent humbugs in the line of nursery stock shows a discouraging need of primary-school teaching on the subject of fruit growing. So long as planters will swallow yarns about trees from seed soaked in anti-blight liquid, and fruit made insect proof by some hocus-pocus method of grafting the trees, so long will the imaginative agents continue to invent new legends of the same stamp. A few days at the fruit growers' institutes ought to render a thoughtful farmer nearly proof against fake tree agents. A little sound knowledge is the best antidote for humbug.

The farmer element in the Connecticut legislature is doing all in its power to retain the political control which it now possesses, owing to the fact that most of the farming towns send two representatives each, that number not being exceeded by the large cities. Thus Connecticut is about the only Eastern State where the rural element holds full sway at the capital. The conservative and sensible legislation which results seems to satisfy the people outside of the politically ambitious elements in some of the large cities. The recent attempt to change the basis of representation did not meet with much popular support, and the former law-makers appear secure in their power so long as it is desired.

The season thus far has not proved very satisfactory to New England gardeners. Profits of the winter crop under glass were fair for those who had coal in stock or were able to get it at reasonable rates, but many were obliged to pay an outrageous price or close their houses. Prices for the greenhouse products were high at times, but the average of returns has not equaled that of some recent years, while the cost of fuel, labor and greenhouse material was greater than usual. While not discouraged, the growers do not show much enthusiasm, and very few new houses have been put up during the past year. Two or three new structures have been erected at Concord and a few small ones in other parts of New England, while the leading producers near the large cities seem to be of the opinion that they have all the area under glass that they care to manage at present.

The Congressional appropriation of \$1,500,000 to erect a new building for the Department of Agriculture looks small beside the request for \$7,000,000 to house the recently established Department of Commerce and Labor. The new corner

might well bear in mind the story of the tall that tried to wag the dog. A more gradual start might be just as desirable. The Department of Agriculture has been an affair of growth, increasing its scope, influence and quality of work steadily year by year, in a thorough and substantial way, which has obtained the respect and confidence of the farming public. In the same way the new department, important and helpful as it is likely to prove, will probably lose nothing in its final standing, if the tendency to mushroom growth is forced to check itself by regard for economy and financial proportion. As in the case of the trusts which the new department is expected to control, overgrowth at the start may cause weakness and various maladies full of trouble for the future.

Why Retire?

In early manhood, in the struggle for existence, we are apt to look forward hopefully to the time when we shall get out of the planning, the anxieties and the labors of every-day business endeavor. When, in fact, we shall be able to retire and live on a well-earned competence. But as the years recede and we grow older our views often change, and, like other illusions of youthful days, we find that retirement is not an unmixed blessing. It frequently becomes a monotonous effort to kill time, and the man that endures it not seldom finds himself in the state of mind of the individual who was wearied of putting on his shoes and stockings every morning and taking them off again at night. He had so little to do that the slightest exertion was probably depressing to him, and he realized that home continuously was not so enjoyable a place as home was as a retreat at night from the cares and turmoils of daily, energetic action. The poet says, "Sweet is pleasure after pain," and the highest enjoyment is derived from contrast. A sorrow's crown of sorrow may consist in remembering happier things, but our highest state of earthly bliss is derived from comparing a present state of felicity with a discomfort that is past. If a person is fond of reading good books, he can, no doubt, pass many delightful hours in his library, but a man cannot read always, any more than he can eat forever. There is mental as well as physical indigestion and dyspepsia.

It would seem to be wise, therefore, for a person to pause and reflect well before he decides to retire from active business pursuits. One cannot break off the habits of long years readily without feeling that he is not a part of the community, and when he has left his old trade or profession behind him, he is often intimidated drop off as a man's business friends desert him when he gets married. He has gone into another world in which they take no interest. The retired gentleman in the ideal is a fortunate being, but in reality he is sometimes a restless, dissatisfied creature, who does not know what to do with himself. He has exhausted all his liking for foreign travel, and, like Sir Charles Coldstream in the old play, he gazes down the crater of the volcano and sees nothing in it.

A man of sense need not labor so hard when he has passed three-score years and ten as when he was two or three decades younger, but we have known business men past seventy who could do a better day's work mentally than many of their younger contemporaries, and we are acquainted with some octogenarians who continue to follow businesses that they have made profitable and reputable by long years of patient and conscientious devotion, not for gain alone, but for the purposes of keeping or perpetuating work well begun and of keeping their minds alert. There is an old merchant in New York who has been one of a firm of a famous grocery house for a half-century, who still takes a prominent part in directing its affairs; and there is a bank president here, who at eighty-six finds his advice eagerly sought in many business matters. The old sage regarding old men for counsel and young men for action seem to apply here. On the border line between seventy and eighty we can point to several men who come down town to business daily, notably to a venerated president of an insurance company, who has kept his heart and his head young by doing good and in finding happiness in the daily faithful discharge of congenial duties. In considering the careers of these worthy veterans, we may well ask the question, "Why retire?"

Come Into the Garden.

This is the season when amateur gardening begins to engage the attention of residents of the suburbs, and this calls attention to a pleasant and profitable recreation in which many men have found respite from brain-devolving toil. Clergymen, lawyers, literary men, merchants and laymen, but not least, ladies, have sought solace from care in cultivating a plot of ground, large or small, and though the occupation has its humorous, and perhaps its annoying side, arising from disappointment in not finding labor rewarded with rich results, there have always been compensating advantages in seeing many flowers bloom and flourish that were planted by comparatively inexperienced hands.

Amateur gardening keeps one outdoors many happy hours at a season of the year when one may derive the most benefit from life in the open air, and though it may not be so exciting as a Presidential trip to the Yellowstone Park, where there are many wild animals, it does more to secure a good night's rest than all the narcotics that were ever prescribed for the sleepless.

And how many books there have been written about gardens which unprofessional hands have tended. "My Summer in a Garden," by the late Charles Dudley Warner, is a classic, the gentle humor of which has, in the florid language of Dick Swiveller, "moulted many a feather from the wing of care," and there are other volumes of a similar character that no intelligent lover of nature can well spare from his library. For instance, the Macmillan Company issues several books that are famous as reflecting the thoughts and experiences of those who did not need the invitation of May to go to the garden, for they found in its lanes and alleys attractions quite as sweet as any young hero might offer. These include, among others, "The Garden of a Com-muter's Wife," which entertains while it instructs; "A Woman's Handy Garden," by Helen Rutherford Ely, that is as practical as it is charming; "English Pleasure Gardens," by Rose Standish Nichols, an inspiring book redolent of the past and full of picturesque suggestions; "Sun Dials and Mosses of Yesterday" and "Old-Time Gardens," by Alice Morse Earle, a delightful writer, who mingles historic lore with fine poetic sentiment; "Flowers and Ferns and Their Haunts," by Mabel Osgood Wright, a fascinating account of woodland and floral treasures; "Elizabeth and Her German Garden" and "The Solitary Summer," by an author whose quaint and amusing sayings have given her a distinctive place in the literature of the day; "The Garden that I

Love" and "In Veronica's Garden," by Alfred Austin, the successor of Tennyson as English poet laureate; "Children's Gardens," by the Hon. Mrs. Evelyn Cecil (Alfred Austin's daughter), in which instruction is clearly conveyed in unscientific language, and "The Book of the Rose," by the Rev. A. Foster Melliar, M. A., who sets forth the claims of his favorite flower with a wealth of pertinent reference that is as enchanting as a good work of fiction.

Certainly the amateur gardener does not lack appropriate literature to inspire him in his pursuit of health and the joy of assisting nature in producing beautiful growths.

The Kaiser and Denmark.

The recent visit of the Emperor of Germany to the King of Denmark has naturally excited a good deal of comment. Many think that its real object is the ultimate inclusion of Denmark in the German Empire, the attainment of which can only be brought about by cultivating the good-will of the Danish people. It is pretty well known that, if there is one person more than another towards whom the Kaiser exhibits the most touching and filial deference, it is the venerable ruler of Denmark, who has just celebrated his eighty-sixth year. Ever since he ascended the throne, the Kaiser has done everything in his power to induce the Danes to forget the animosity towards Germany consequent upon the war of 1864, which caused the cession by Denmark of Schleswig, Holstein and Lauenburg.

The first visit which the Kaiser paid after the death of his father was to King Christian at Copenhagen, on whom he called before he went to Russia, Austria and Italy. Although he was received on that occasion with groans and hisses in the Danish capital, he has returned there several times since and has showered every kind of attention upon the old monarch. The Kaiser's great regard for King Christian, whom he calls uncle, notwithstanding the absence of any relationship, dates back to some festivities at the Castle of Rumpenheim in Hesse, when he was twenty years old. The Kaiser was so noisy, forward and assertive on that occasion that he caused the king to be annoyed; but he found out in King Christian, who showed him much affection, and stated openly that young William was misjudged and that some day he would make a great name for himself.

The Kaiser, unlike Bismarck, believes that persuasion is often better than coercion, and he has a powerful reason for his efforts to win Denmark. It is the argument of self-interest. Of late years the Danes have not enjoyed much worldly prosperity; in fact they are poorer, and were heartily in favor of the movement to sell the Danish West Indies to the United States, which was defeated through powerful but obscure influences. If the Danish people are once convinced that the incorporation of their country in the German Empire will be for their immense material gain, they will not allow the bitter feelings created forty years ago to control their course. The Germanization of Denmark is among the possibilities of a not-distant future.

Once More.

There was a time when yacht racing really meant something, when it was a contest between vessels that were serviceable and not a race between what have been called, not inaptly, skimming dishes. The Queen's cup was brought home under the former conditions, and it truly was a trophy worth possessing, for it was won by good seamanship in a seaworthy boat.

Now if we lose or keep the cup, there will be no great cause for rejoicing over triumph or for sorrowing over defeat, since the race will be only between two toys that are of no practical use and that will soon be put away like other childish things. An automobile or a bicycle is of some value for every-day purposes on land, but a craft like the Shamrock III, which has just met with disaster, is only a creation for swift going through the water and nothing else. A rich man may afford such a plaything, but in possessing it is he not encouraging a sport in which there is constant danger to life and limb? Sir Thomas Lipton can, of course, have his new challenger repaired so that it will be ready for the race here this year, with improvements that may prevent future accidents, but a great many people are of the opinion that if he would refrain from entering another contest he would do a good work in discouraging a pastime that is degenerating into a burlesque of yacht racing.

If the cup cannot be taken to England without endangering human life, it had better remain here forever. We look back with horror at the degrading sports of the Roman amphitheatre, and we regard with disgust bull fighting in Spain, why, then, should we countenance a pleasure that is likely to send a poor man to a watery grave without a moment's warning.

The disagreeable experience through which Sir Thomas Lipton passed last week is only a repetition of a similar one which he had nearly two years ago when King Edward was on board the Shamrock II, but luckily on that occasion no death resulted from the misfortune. The impression prevailing among many people interested in

real yachting is 'hat Sir Thomas Lipton might display his courage and perseverance in another way than in striving to win a trophy which he has more than once failed to capture. Poor Collier's death is regretted, but there is little or no excuse for his sudden taking off.

Dairy Jottings.

Do not allow silage and other food about the stable at milking time. Many more odors get into the milk after it has been drawn from the cow than comes with the cow.

Remove the milk from the stable as soon as possible after milking.

A milk-pail covered with a layer of absorbent cotton between two layers of cheese cloth is a good protection to the milk from outside surroundings.

For the small dairymen it is a good plan for the milkers to have water and sponge and to clean the udder of each cow just before milking. The first few streams of each teat contain but little cream and butter fat, but contain many bacteria which enter the mouth of the milk duct, and should be discarded.

Every one hundred pounds of whey contains six pounds of solids. Why should it be used before it gets sour to get the most out of it.

The short courses of dairying have been the means of making some of the best experts in cheese and butter-making. They afford a good opportunity for young men.

Do not use soap in the milk strainers, sal soda is better.

Old cloth strainers are a common cause of tainted milk. It is safer not to use a cloth strainer more than two days, then burn it.

Wells and Springs in Vermont.

The United States Geological Survey has made arrangements with Prof. George H. Perkins of the University of Vermont to undertake in connection with his work as State geologist the investigation of the sources and qualities of the waters used for domestic and manufacturing purposes throughout the State, especially those derived from deep wells and from springs. Professor Perkins will visit the districts in which the deeper wells and more important springs are located, and will collect information regarding the depths of the water supplies, the volume of water obtainable, and its chemical and sanitary properties. It is hoped that the investigation, the results of which when completed will be published by the survey in a report for free distribution to the people, will throw new light on the occurrence of water both in the bedded and in the granitic rocks, and especially on the relation of rock waters to the presence of joints or other fissures in the rocks.

Health and Farm Surroundings.

Our large cities generally have efficient health boards who look after the public health and the enforcement of sanitary regulations necessary for its preservation. Houses are built under the supervision of a building inspector, sewers are provided and sewer connections are inspected by paid officials, garbage is removed, cases of infectious disease are isolated in their homes or at hospitals. If the water supply is not from a pure source, the residents are instructed to boil or filter the water used for drinking.

On the other hand, the occupant of a farm-house is, as a rule, left to his own devices, and is often ignorant of the dangers which surround him. A considerable mortality occurs in farm-houses from infectious diseases, and especially from consumption, diphtheria, typhoid fever and the malarial fevers.

In the light of our present knowledge, all these diseases must be considered preventable. All are due to well-known germs, and if these germs are excluded from the farm-house and its vicinity, its occupants will be safe from these diseases. A well-known expert, Dr. G. M. Sternberg, surgeon-general of the United States Army, has lately furnished an article on this subject to the Youth's Companion, and the substance of the contribution is given herewith.

DISEASE AND INSECTS.

When a case of diphtheria, typhoid fever or consumption occurs in a farm-house, it too often happens that proper isolation of the sick person and disinfection of his discharges containing the germs of these diseases are either entirely neglected or carried out in a very inadequate manner.

To escape the pest of flies and the dangers attending their visits to the farm-house after frequenting foul places, the house should be well removed from farm-yards and stables, and the immediate surroundings should be kept in a perfect state of sanitary cleanness. This, with fly-screens and a careful housework, will accomplish what is possible in the way of avoiding this source of danger. And if all infectious material is promptly destroyed by fire or boiling water, or by suitable chemical disinfectants, the danger from this source will be reduced to a minimum.

DAMPNESS.

Although the presence of the germ is essential for the development of an attack, there are certain predisposing causes which

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make the individual much more susceptible to infection when the specific germ is in any way introduced into his body. Great fatigue, mental worry, insufficient or indigestible food, all tend to lower the vital resisting power and to make an individual liable to infection.

As regards the farm-house itself, it is probable that dampness is the most common sanitary defect. Dampness in the house gives rise to sore throats and "colds," and persons suffering from such affections, either in an acute or chronic form, are especially liable to contract diphtheria, influenza, pneumonia or consumption.

Farm-houses, especially those built many years ago, often have very little space and no ventilation beneath the ground floor, and cellars are frequently damp and unwholesome.

SUNLIGHT.

Again, farm-houses are often shaded by trees or vines which cause the rooms to be dark and more or less damp.

Persons living in such rooms are commonly pale and more or less anemic. The farmer himself, as he passes most of the day in the open air, does not suffer for lack of sunshine; but his wife and daughters are very apt to show the effects of the exclusion of the beneficent rays of the sun from the apartments in which they spend a large part of their time. Moreover, sunshine is one of the best disinfecting agents. Disease germs retain their vitality a long time in dark and damp places, but, as a rule, are quickly killed by the germicidal and drying effects of direct exposure to the sun's rays.

It is better to cut down the beautiful old trees which have, perhaps, sheltered the home for many years, and are associated with it in the affections of present and absent members of the family, than to allow the inmates of the farm-house to grow pale and feeble for want of "God's sunshine," which is essential to the life and well-being of all living things, except the very lowest—such as fungus and earthworms.

WATER AND TYPHOID.

If the farm-house is supplied with pure spring water, or with water from a deep well so situated that contamination by surface drainage or from a vault, or cesspool in dangerous proximity is out of the question, one great source of disease in the rural districts will be avoided. It is unfortunate, but true, that many denizens of city houses who go to the country for pure air and rest during the summer months fall sick as a result of drinking impure water.

Indeed, it is a well-established fact that milk distributed in cities from dairy farms in the country has not infrequently been proved to have conveyed typhoid fever germs to the unsuspecting consumers, causing an epidemic of the disease restricted solely to those using the milk from a particular dairy. The presence of the typhoid bacillus in such cases has usually been traced to contaminated water used to dilute the milk or to wash the vessels in which it was contained.

DANGERS FROM MOSQUITOES.

The space at my disposal will permit only a word with reference to the prevention of malarial fevers, which are so prevalent in many parts of the country, and which are the principal cause of sickness among the rural population in certain regions. We now know that these fevers are due to a blood parasite which is introduced into the circulation of man by a certain species of mosquito. We also know that this mosquito breeds not only in swampy places, but in any little pools of stagnant water, or in receptacles of rain-water standing about the house.

The ways in which we should combat this pestiferous insect are apparent. Drain swampy places in the vicinity of the farm-house, fill up or drain all pools of stagnant water, and remove all receptacles of rain-water. Pools that cannot be drained should be treated with crude carbolic acid, which floats on the surface of the water, and kills the larvae of the mosquito when they come to the surface to breathe.

The old formula for escaping malarial fevers was: Avoid the night air. It is hardly necessary to mention the mosquito-bar as a valuable adjunct in enabling those who reside in so-called "malarial regions" to escape infection by the malarial parasite.



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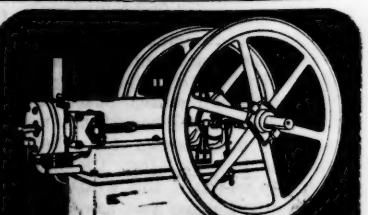
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For the
Last week...
This week...
One year ago...
Horses, \$25.
Price
Barn-Fer...
hides, tallow...
quality, \$2.50...
third quality...
\$4.75 @ 7.25...
\$3.00 @ 1.50...
SHRIMP-Fe...
44¢ @ 8¢...
\$4.57; lambs...
FAT HOGS...
weight; shote...
dressed hogs...
VEAL CALF...
Hides—Br...
CATTLE SKIN...
TALLOW—1...
4¢ @ 1¢...
PELTS—50¢...
Catt...
Halls...
Farmington...
Co. E...
E. Walker
Vermont...
At New...
Via N. H...
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Massachusetts...
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At Erie...
Scattering...
M. Abrams...
J. Kerrigan...
E. Clark
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225, mostly at...
at \$175 @ 25...
5 carloads w...
week's sale.
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at New Eng...
some at the...
about the sam...
fairly good at...
No oxen not...
1100 lbs, at 3...
1100 lbs, at 3...
at 3¢; 4 cows...
4 cows, 225...
cows, 2100 lbs...
For Western...
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but the bulk...
were light, bu...
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Calf market...
rivals increas...
of sales most...
S. Henry sold...
sales at 4¢ @ 7...
Eleven tons...
Dr...
Farms—F...
Vermont—J...
550; via Nashua...
Massachusetts...
bush, 7; H. W...
Dennett, 1; sea...
more, 38; T. J...
E. J. J...
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horses, 10...
Massachusetts...
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last week. O...
handed to a nu...
easier on be...
cost 4¢ @ 5.50...
4¢; 1 cow, 3¢...
Mortney, 4 cow...
lbs, at 3¢. A...
1200 lbs, at 1¢...
A fair run...
on Hampshire...
movement fair...
no difficulty in...
Most of sales...
at 6¢; 6¢ and 9¢...
Wednesday...
calves are being...
J. McFlynn has...
and is calves th...
Horton says up...
store cattle will...
days. Fair disc...
anticipate b...
George Cheney...
of 6200 lbs, at...
A. Waite, 2 sh...
at 2¢; 2 of 1000...
H. Bowman, 3...
15 hogs, 2200 lbs...
1000 lbs, at 4¢; 5

The Markets.

BOSTON LIVE STOCK MARKETS.

ARRIVALS OF LIVE STOCK AT WATERTOWN AND BRIGHTON.

For the week ending April 29, 1903.

	Shots	Fat
Cattle	3134	1608
Sheep	3327	1485
Hogs	3343	112
Calves	4951	20,565
Swine	3037	

Prices on Northern Cattle.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Southern Cattle.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Sheep.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Hogs.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Calves.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Swine.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Poultry.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Eggs.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Butter.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Cheese.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Lard.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Tallow.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Soap.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Candles.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Oil.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Flour.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Grain.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Hay.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Straw.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Manure.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Bones.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Blood.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Hair.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Horns.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Hooves.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Tails.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Ears.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Feet.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Claws.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Skin.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Hide.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Bones.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Blood.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Hair.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Prices on Horns.

Per hundred pounds on total weight of live weight, extra, \$4.50; second quality, \$4.00; third quality, \$3.50; fourth quality, \$3.00; fifth quality, \$2.50; sixth quality, \$2.00; seventh quality, \$1.50; eighth quality, \$1.00; ninth quality, \$0.50; tenth quality, \$0.25.

Grouse, pintail, pair	125 1/2
Wild ducks, pair	125 1/2
Calves	125 1/2
Redhead	125 1/2
Mallard	125 1/2
Ruddy	125 1/2
Small	125 1/2

NOTE—Assorted sizes quoted below include 20, 30, 50 lb. tubs only.

VT. & N. Y. extra.

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It is easy to count growers in his immediate neighborhood. When grain is sold by contract, it is a puzzle to the several experts to whom they are shown. The apples somewhat resemble the Maine King, and still more closely the Butter, a Western variety. They were finally decided to be from a seedling probably descended from the King variety. Professor Maynard says: "If the tree, as stated, is always of a dwarf or compact growth, that would indicate that it is a seedling. I found in a recent trip in Maine on Institute work that of all varieties are rather harder and more brilliantly colored than in most soils in Massachusetts, and that the tendency of the trees is to a more stocky and compact growth."

Some years ago N. W. Woodfin of Buncombe County, N. C., plowed an acre of old field to the depth of sixteen inches and fertilized heavily. He then planted corn in drills three feet by seven inches. Each stalk had an average diameter of 1 1/2 square feet. In the fall he gathered 40 bushels and two quarts of corn. The summer was sufficiently dry to fire corn, with the usual distance cultivated in the ordinary way, but here the corn, though thick, kept green to the ground and flourished throughout the dry weather.

Carload of Grain.—S. Bros., Middlesex County, Mass. When grain is sold by contract without a specific quantity being named at time of sale, a carload of corn or rye should contain eight hundred bushels each; a carload of oats 1200 bushels and a carload of wheat eight hundred bushels.

Flax.—G. W. A. Hartford County, Ct. The insects on the cutting of geranium are the common plant aphid. Four quarts of boiling water on a handful of tobacco stems and cover until cool. Sprinkle the water over the plants thoroughly with a white cloth.

Beets or Ensilage. Corn ensilage and sugar beets were tested at the Nebraska station as to their value as succulent feed when given to dairy cows. The herd was divided into two lots, the same in all respects, for testing alfalfa and hay. The results showed by an analysis of the feed in favor of ensilage, but the difference was very slight. It seems to be more a question of how cheaply the two succulent feeds are produced than of their feeding value. Both foods gave good results and were well liked by the animals.

Fighting Weeds. To kill weeds which have perennial root stocks a German authority recommends following, and early in the spring a thorough and deep harrowing over of the land, after which the root stocks are raked and burned. For the eradication of aquatic or horse-weed, a thorough draining of the soil together with cultivation are suggested. Fertilizers, particularly of lime ones, are recommended for combating sorrel. Soil in which this plant grows abundantly are usually characterized by an acid condition which requires the application of lime for its correction.

Poultry and Eggs. The total number of chickens, including guinea fowls, on farms and ranges in 1900, according to the Government census, just published, was 238,886,665; the total number of turkeys, 4,388,333; geese, 5,655,555; ducks, 1,111,111; and other fowls, 1,111,111. The returns received poultry was kept on 88.3 per cent of the farms in the United States. The total value of the poultry raised on farms and ranges in 1900 was \$1,111,111. The production of eggs in 1900 was 1,111,111,000, an average of 5.5 dozens per chicken. No consideration was given to turkeys, geese or ducks in calculating this average, as eggs from those fowls are used for other than food purposes. The total value of the eggs was \$111,111,000, or an average value of 11.2 cents per dozen.

Red Clover and Alsike. But little difference is noted in the feeding of fertilizing value of red alsike clover. Alsike clover contains a little more nitrogenous material than the red, but less of fat and nitrogen. The analysis of these clovers with reference to their fertilizing ingredients is as follows: Red clover, nitrogen, 2.14 per cent; phosphoric acid, 4.47; potassium oxide, 2.26. Alsike clover, nitrogen, 2.27; phosphoric acid, 4.68; potassium oxide, 2.24. Alsike clover is especially recommended for the production of milk. It is a finer plant and consequently makes a better hay, and if cut early and dried well, will produce the best results with its seedling in the State.

General sketch is given in Bulletin 85 of the subjects of forests and forestry and a review of the present condition of the forests of Rhode Island. Referring to a statement made in 1887 in a report of the United States Division of Forestry, to the effect that in a strict sense the forests had ceased to exist in Rhode Island, and that practically all the timber reported as cut in the State had been brought from other States, the author shows that in 1900 there were thirty-three sawmills in the State, with a total capacity of 1,111,111 feet of lumber per annum. The total value of the lumber produced in 1900 was \$1,111,111. The total value of the lumber produced in 1900 was \$1,111,111.

Dried Vegetables. In Germany an important industry is being established in dried vegetables. At one factory in West Germany, for example, an average of 100 tons of the following materials were dealt with: 150 tons of French beans (sliced), 300 tons carrots, 100 tons savory, fifty tons celery, 100 tons potatoes, 100 tons water cabbage, fifty tons onions, fifty-four tons turnips, total, 1075 tons. This firm is now doubling their plant. When the factory was first founded only twelve per cent of the vegetables could be obtained locally, but in 1900 they were thirty-three sawmills in the immediate neighborhood of the factory, and in Rhode Island the value of the vegetables found it so profitable to grow a supply of the raw produce, that they now have 125 acres under cultivation for this company, and another fifty acres at a little distance away.

Extent of Irrigation. Exclusive of the rice-producing States, the Territory of Alaska, \$4,552,540; \$4,552,540. Spring, clear and straight, \$3,403.50. Winter patents, \$3,403.50. Winter, clear and straight, \$3,403.50. Corn Meal—\$1.05 to 1.07 per bag, and \$2.25 to 2.30 per barrel; granulated, 2.75 to 2.85 per barrel. Spring Wheat—Quoted at \$2.85 to \$3.00 per barrel. Corn Meal—Firm at \$4.00 to \$4.10 per barrel, and \$4.50 to \$4.60 for cut and ground. Bye Flour—The market is steady at \$2.95 to \$3.00 per barrel.

Demand quiet, supply small. Steamer, yellow, 57c. No. 2, yellow, 56c. No. 3, yellow, 55c. Demand quiet, prices firm. Clipped, fancy, 48c. No. 2, clipped, 47c. No.

Our Homes.

The Workbox.
INFANT'S CROCHETED SACQUE.
(Ridge and Point Stitch.)

Procure 4 skeins of white saxon yarn, also 1 skein of colored saxon. A bone hook. Chain 35 stitches for the neck. Work 1 double in each of 16 stitches (this stitch is the same as used in slippers, working into back part of stitch), widen by 3 stitches in next stitch, work 1 double in each of 9 stitches, and widen in the next stitch as before. Work 35 stitches and widen, then 9 stitches and widen. Make a chain to turn, then go back, widening in the stitch every time, which forms the shoulder. Make 12 rows, then four times across the front and back. The yoke is ridge or slipper stitch.

The ribbon row for neck—One treble, chain 1, repeat across.

The body is point stitch. Make by putting your hook in the first stitch of yoke. Chain 3 stitches, put yarn over hook, in the next stitch, over hook and in the next stitch. Take all off at once; draw through the remaining stitch to close. Make two rows on front and back, join under the arm, go back and forth until you have 15 rows.

Border—Make 3 rows of cross stitches, then a scallop all around the sacque. Sleeves are point stitch. Make 14 rows with 39 stitches around. Begin under the arm and widen on top for fullest. The cuff is ridge stitch; draw in so to have 39 stitches around the ribbon row. Treble, 1 chain. Treble, 1 chain and join. Make 3 rows of ridge stitch. Finish with small scallop.

EVA M. NILES.

St. Vitus's Dance.

The name of St. Vitus's dance was originally given to a form of hysterical convulsions, of which history records many epidemics in the Middle Ages; but it is now popularly used to denote a milder form of irregular muscular movements, called in medical parlance chorea.

The disease chiefly affects children, and almost always those who are anemic and "run down" in health by long hours of study, insufficient or improper food, lack of outdoor exercise, sleeping in poorly ventilated rooms, or who are conversing with some acute fever. It is so frequently associated with rheumatism that some physicians believe it to be simply one of the manifestations of that malady.

The first signs of the approaching trouble are usually seen in a change of disposition. The child becomes irritable and ill-natured, neglectful of his studies and indifferent to play. The appetite is poor and capricious. Candy, pickles and stalest delicacies are preferred to roast beef and potatoes, and the nights are restless and disturbed by terrifying dreams.

After a period of this distressing state, in which the parents hardly know whether the child is sick or only naughty, the muscular twitching begins in one arm or the face. The eyes wink, the corner of the mouth is drawn up, the head is pulled to one side or backward, the shoulder is shrugged, the arm is bent or straightened irregularly, the hand jerks so that objects held therein may be thrown across the room.

These movements are without any regularity whatever. Often no two are alike. They vary greatly in degree and extent, from a slight jerk of one or two muscles or a grimace of the face to uncontrollable convulsions of the entire body.

The foundation of treatment is tonic and upbuilding. The child should be tempted to eat good, nourishing food with an abundance of milk, cream and butter. He should spend long hours out of doors, and should sleep in a room with open windows, under watch, if necessary, through the night to see that in his thrashing about he does not throw off the bedclothes, although usually the movements cease during sleep. In all cases the treatment should be conducted under the guidance of a physician.—Youth's Companion.

Half-Done Work Is Always Wasteful.

The extravagance and waste of doing work badly are most lamentable. We can never overestimate the value, in a successful life, of an early formed habit of doing everything to a finish, and thus relieving ourselves of the necessity of doing things more than once. Oh, the waste in half-dones, careless, patched work!

The extravagance and loss resulting from a slipshod education is almost beyond computation. To be under the necessity, all through one's life, of patching up, of having to do over again, half-done and botched work, is not only a source of terrible waste, but the subsequent loss of self-respect and life is also very great.

There is great economy in putting the highest possible personal investment in everything we do. Any thoroughness of effort which raises personal power to a higher value is a judicious expenditure of individual effort. Do not be afraid to show thoroughness in whatever you undertake. Thoroughness is a great quality when once mastered. It makes all work easier and brings to life more sunshine.—Success.

Custards.

The direction for baking all cup custards is the same. Pour the mixture into cups, set them into a pan of hot water, and bake in a rather moderate oven about twenty minutes, or until the custard is set in the center. Custards are best served cold. Sponge cake or angel's food is a delicious accompaniment to custard. Each of the following receipts will make enough to fill four custard cups. The chief care in making custards is to mix the ingredients thoroughly.

Maple Custard—Beat three eggs until a full spoonful can be beaten. Add a pinch of salt, one-third cupful of maple syrup, and when these are well mixed, add two cupfuls of milk. Strain and bake as directed.

Nut Custard—Rub four level tablespoonfuls of nut butter smooth with one cupful of water. Beat two eggs light, with eight level tablespoonfuls of sugar and add to the butter with a pinch of salt. Mix well with another cup of warm water and cook in a

double boiler till creamy. Then bake as directed. To make this of different flavors, use different kinds of nut butter.

Caramel Custard—Let one-half cupful of brown sugar melt and brown in a saucepan over a moderate fire, stirring constantly to prevent burning. When well browned, pour over it one-quarter (coffee) cupful of boiling water, and let it simmer slowly. Beat two eggs, add a pinch of salt and one pint of milk. When the caramel is melted add it to the milk and stir well. Bake as directed.

Chocolate Custard—Heat to the boiling point in a double boiler, one cupful of milk and one cupful of water, or preferably, two cupfuls of milk. Put in a granite saucepan or cup over a moderate fire one-half sugar of Baker's chocolate, shaved up, four tablespoonfuls of granulated sugar and one-half tablespoonful of water. Stir this constantly until it is smooth and glossy. Add the hot milk, slowly, beating thoroughly. When this is tepid add it to two eggs beaten thoroughly. Add a pinch of salt and one-half teaspoonful of vanilla. Beat all together thoroughly and bake as directed.

Cocoa Custard—Heat one cupful of milk and one cupful of water, or preferably, two cupfuls of milk to the boiling point in a double boiler. Mix together thoroughly four even teaspoonfuls of Baker's cocoa and four tablespoonfuls of granulated sugar. To this add the hot milk slowly. When this is tepid add it to two eggs beaten thick. Add a pinch of salt and one-half teaspoonful of vanilla. Beat thoroughly and bake as directed.

Coffee Custard—Beat till light two eggs, a pinch of salt and two tablespoonfuls of sugar. Add slowly two-thirds of a cupful of milk and 1/3 cupful of clear, cold coffee. Beat up thoroughly and bake as directed.

Pumpkin Custard—This is merely the custard pie of pumpkin pie for which it is an excellent substitute. Mix well one-half cupful of sugar, one even teaspoonful of ginger and two even teaspoonfuls of cinnamon. With these, beat up one egg till light. Add two-thirds cupful strained pumpkin, then 1/3 cupful of milk. Beat till thoroughly mixed and bake as directed.

Lemon Custard—(For four custard cups). Heat one full cupful of milk to the boiling point in a double boiler. Then stir into it one tablespoonful of corn starch, beaten smooth with a little cold water. Keep stirring until the milk has thickened, and starch well cooked, about fifteen minutes. Then add to it the yolks of two eggs, beaten smooth with one teaspoonful of cold water. Cook the mixture a few minutes longer still in the double boiler. Take from the fire. About a half hour before you wish to serve the custard: Mix together one small cupful of white sugar and the grated rind and juice of one small lemon; make a meringue with the whites of the two eggs; stir the lemon juice and sugar quickly and thoroughly into the custard and fold into it the meringue; pile lightly into the glass custard cups and serve very cold. Salted wafers are an excellent accompaniment. Orange custard may be made in the same way.—N. Y. Observer.

A Plea for Less Hustling.

The ambition that every typical American feels, to do better than every one else in everything, is one of the most splendidly audacious national characteristics to be found in history. It is grand to think that, one day or another, we must, by native right, excel the English in commerce, the French in taste, the Germans in scholarship, the Italians in art, the Greeks in wisdom, and the Hebrews in the knowledge of God. With so much to accomplish, the American spirit cannot be like Goethe's star, *Ohne Hast aber ohne Rast*—it must be equally without leisure and without pause. Those in the front must leap into the trench and die, in order that those in the rear may pass over. Of this sort of sacrifice there has been no lack. It began when the first explorers touched our shores; and it has been ready, at all times since, for every emergency of commerce, religion or war. It has made the country. It has built up every State and city and house of business and seat of learning. Those who have come after have profited by the unflagging spirit of those who have gone before—of those who worked hard and often died too early. But it may be reasonably asked if the day has not come for a quieter pace, and a less feverish sense of duty. The country is colossal rich and prosperous, even if it be not rich and prosperous enough. May not the individual begin to put forth his claim? May he not be permitted to remember that in the Pantheon there are other gods besides the great *Idol* hustle? While doing his daily work and treading his common path, has he not a right to some measure of that tranquility which now he can look for only in the tomb?—or in flinging a change of raiment into a valise and sailing out into that big, unsatisfactory void which we call *Abroad*? In these days of co-operating energies we might venture to suggest

A Society for Enabling Americans, Who Want to do so,

To Stay Quietly at Home,

Without being Rushed to Death.

—Harper's Weekly.

Novel Dishes.

A series of novel dishes were served in a recent lesson at the New England School of Cookery, when the menu consisted of Rhode Island chowder, corn timbales, walnut pudding with sauce and fruit punch.

The Rhode Island chowder, which is called the glorification of an old recipe, the result is a most appetizing and satisfying soup, sufficient for the principal course in a dinner or luncheon. To make it, put into a spider one-third of a cup of fine cubes of fat salt pork, one large onion finely sliced and half a cup of water. Cook till reduced to a small quantity of rich liquor. To four cups of potato cubes which have been parboiled, add this liquor, the strained juice from one quart of clams, the hard portions of the clams finely chopped, and one pint of boiling water. Cook till the potatoes are nearly done, then add one cup of stewed, strained tomato, a quarter of a teaspoonful of baking soda and the soft part of the clams. Allow this to simmer gently. Before pouring the chowder into the tureen, add two cups of scalding milk, two tablespoonfuls of butter, one teaspoonful of salt, a dash of pepper and cayenne and a dozen small crackers.

The corn timbales are a delicate sort of soufflé which may be made from a left-over of old corn or from one can of corn, when the fresh vegetable is not in season. Chop the corn fine, add two eggs slightly beaten, one teaspoonful of salt, a dash of pepper, 1/2 tablespoonful of melted butter and one pint of scalding milk. As this dish contains the egg and milk mixture, which is in reality a custard, it requires the same careful cooking a custard does. Pour the corn

mixture in buttered timbale irons, set them in a pan of hot water and bake in a slow oven till firm. They may be turned out on a hot platter and garnished with parsley, to be served as an entree.

The walnut pudding is a cake-like dessert, made from a novel combination of materials. The result is something so light and delicious that it should not be left to the imagination; it must be tried for just appreciation. Beat the yolks of three eggs till light and lemon colored. Gradually add to them half a cup of sugar, then one-third of a cup of soft bread crumbs and a scant half cup of farina. Mix perfectly, fold in the whites of three eggs beaten stiff and half a cup of broken nut meats. Pour into layer cake pans which have been buttered and floured. Bake for half an hour in a slow oven. When slightly cooled put the layers together with a creamy sauce made as follows: Cream one-half cup of butter, add gradually one-half cup of sifted powdered sugar and two tablespoonfuls of milk, added drop by drop. Flavor with one tablespoonful of brandy. If desired this pudding may be served as it is, or with a sauce for which the following recipe provides:

Mix one-half cup of sugar, 1/3 tablespoonful of flour and a dash of salt. Pour over this one cup of boiling water and cook five minutes. Add two tablespoonfuls of butter and vanilla for flavoring. Serve hot.

The last course in this little dinner was a fascinating violet-tinted punch of delicate flavor. To make it, put one cup of grated pineapple with one pint of water, cook for fifteen minutes. Strain through cheese-cloth, pressing out all the juice. Add one pint of water and two cups of sugar, which have been boiled ten minutes, half a cup of lemon juice, the juice of three lemons and three lemons, one cup of grape juice and 2/3 quart of water. Put in a punch-bowl with a large lump of ice. Serve perfectly chilled in sherbet glasses.—Good Housekeeping.

The Embroidered Shirt Waist.

The girl who is clever with her needle has now a chance to use that gift, or accomplishment, for embroidering her shirt waists for the summer. Linen, white and rather smooth, is the material par excellence for these waists, that are embroidered in floral or conventional designs, with mercerized linen floss, that has almost the lustre of silk.

The shops show very good assortments of shirt-waist patterns already marked for embroidery, or, if one prefers, there are places where the stamping is done to order when both material and design can be selected. Silk waists are done in silk floss. The cross-stitch embroidery done in colors is applied to the straight collar, cuffs and centre plait down the front, and sometimes to the belt, as it is now a fad to have the belt of the same material as the collar and cuffs; sets of this kind of white muslin with spots of color done in crewel, being one of the forms of this fashion.

The shirt waist with the embroidered fronts will, however, be generally finished at the neck with one of the many and attractive stock collars, which are made up of braids or bands and fancy stitcheries, with the tabs in front. Many girls will make these up at home at much less expense than the shops offer them for. It is a good idea to buy a stock or two of embroidered style, and copy them at home, or make variations upon them. The narrow bias bands folded and pressed for use, can be bought at a low price for adaptations to these pretty collars and cuffs.—The Examiner.

Domestic Hints.

PRUNE SOUFFLE.
Soak and stew two dozen prunes, and when tender mix four eggs and six tablespoonfuls of powdered sugar and the prunes and beat well. Put into the mixture one tablespoonful of sifted flour, a quarter of a teaspoonful of cream of tartar, and one-half cupful of lemon extract. Bake twenty minutes in a slow oven. Serve cold with sauce made as follows: One pint of sweet milk, three-quarters of a cup of sugar, the yolks of four eggs and one teaspoonful of lemon made into a soft curd. The sauce should also be cold when served.

SALMON TURBOT.
Put a tablespoonful of butter in a double boiler. When melted mix in one tablespoonful of flour and add one pint of milk. Cook until quite thick. Then take one can of salmon and make in baking dish, putting in one layer of salmon, then one of thickened milk with two hard-boiled eggs chopped into it, salmon again, then milk, and so on until all is used. Sprinkle bread crumbs on top and bake till brown in hot oven.—Good Housekeeping.

CABBAGE AND POTATO SALAD.
Take one cup of chopped white cabbage, one pint of potato, sliced, and mix with cream dressing. Add capers, boiled beets, sliced, and chopped red peppers to taste. Garnish with crescents of lemon and watercress or celery tops.

MOCK CRABAPPLE CROQUETTES.
Two cups of cold water, one cup of the best-chopped fine, one cup of chopped English walnuts. Mix together and chop again with a tablespoonful of butter, an even tablespoonful of grated onion, a scant teaspoonful of ground mace, salt and pepper to taste, and a dash of nutmeg. The mixture should be made in a saucepan with half a tablespoonful of flour and add gradually to it a cupful of rich milk; when this comes to a boil add the other ingredients, salt and pepper to taste, then stir in two well-beaten eggs, remove from the fire and add a tablespoonful of lemon juice; turn out on a platter to cool, form into cylinders, dip in egg and breadcrumbs, as usual, and fry in boiling fat.

SWEET-BREADS A LA MILANAISE. (CHAPFING-DISH.)

Mince very fine three breads that have been carefully prepared and thoroughly parboiled; add a tablespoonful of Parmesan cheese grated, a little salt and cayenne, and the beaten yolks of two eggs; mix thoroughly. Put into the chafing-dish two tablespoonfuls of butter; when this is melted, stir in the above mixture; let it brown slightly, and serve hot.

RAOULT OF ASPARAGUS WITH MOCK MEAT BALLS.

Scrape and wash a bunch of asparagus, cut in pieces about an inch long as far as the stalks are tender, put the remainder of the stalks with an onion into a saucepan, cover with boiling water and let it cook until tender—about half an hour. Then mash them in the water in which they were boiled and add a color. Remove the water, and when it comes to a boil throw in the points and cook until tender. While that is cooking, make some mock meat, form into balls as large as a walnut. Cook them in salted boiling water for five minutes, drain them from the water, so the asparagus points from the stock, put them together in a saucepan to keep hot while making a gravy. Melt a generous heaping tablespoonful of butter in a spider, add to it when it bubbles a large heaping tablespoonful of flour, stir well, add a dash of salt, a dash of cayenne, and a dash of pepper, and let it come to a boil and serve on a platter. Garnish with parsley.

Hints to Housekeepers.

A reputable medical journal makes the statement that any one who eats fresh lettuce daily will be made absolutely immune from small-pox. Small-pox is a typical scurvy disease, like scurvy, and rages in the winter season when poor people are deprived of fresh vegetable food. Onions and celery are as good perhaps as lettuce, but they are eaten some time after being gathered and thus lose most of their anti-scurvy power, or

ties. Lettuce, on the other hand, must be eaten very soon after leaving the garden, and hence retains the properties which are claimed to prevent small-pox.

Instead of using forty and fifty thread when sewing calicoes, domestics and goods of like texture on the machine, use sixty and seventy, and it will both look better and wear better. The three threads of the needle and the four threads imbedded in the material and become almost like a part of it, while the coarse thread being raised above the surface is subjected to more wear.

Buckle bows are one of the newest caprices for hat trimmings. In place of the fat quills of last season the little uncurled feathers from the body of the ostrich are much used for ready-to-wear hats intended to accompany tailor suits. Rosettes, bows and twists, all fashioned of the same straw as the hat, are approved for the ornamentation of fancy colored straw hats.

A very ingenious poison label for medicine bottles is a small scarlet skull with a long pin attachment to stick deep into the cork. One of these, or something similar, should be firmly fastened to every bottle in the medicine chest or closet where the contents are not for internal application. There will always be careless members of the household who walk into a dark room and grope for medicines, and a goodly proportion of these will come to grief sooner or later.

The new English gloves ought to produce a sensation, but not having Omnia et in omnia, the younger men who used to take a pride in showing off the latest haberdashery, it may be some time before there will be one courageous enough to exhibit them. They are of chambray and are of bright canary color. The advantage is that they can be washed, and they are immensely popular in London.

A small scrubbing brush is unexcelled as a vegetable cleaner. The water in which vegetable washes are made should be lukewarm, not icy cold, as many housekeepers think. There is no advantage in very cold water, and it is hard on the hands of the washer.

In making potato salad, a cooking authority says, much better results will be obtained by pouring a hot dressing over cold potatoes or a cold dressing over hot potatoes, than by using dressing and potatoes both either hot or cold. The unpleasant clamminess noticeable in many potato salads is obviated in this way.

English walnuts and potatoes make a savory spring salad. Break each into pieces the size of a pea, then cover with any good salad dressing. Cabbage is not by any means to be despised as a spring salad. Shredded and served with a cream dressing it is excellent. A little celery and onion, finely minced, and a dash of lemon juice combine delightfully, although the mixture does sound queer. Three parts of cabbage to one of the nuts is a good proportion.

Fashion Notes.

A stylish effect is produced on an Eton blouse jacket of black peau de soie by the introduction of tucks about an inch wide, which are wide, that extend from shoulder to belt, after the manner of tucking on a dress waist. These tucks are each finished with three rows of silk stitching, and are arranged on both the front and the back of the jacket. A slightly full effect is given to the skirt by a large, wide, gathered, buttoned or worn open to show the satin facing. Tailor-finished lapels are formed where they meet the rolling collar, and bishop sleeves with tucks on the outside to the elbow drop over the shoulders, embroidered with rows of stitching and small tailor buttons.

Among other dress fabrics on view this week are corded French gingham in plain delicate colorings and a variety of checks, plaids and stripes; printed tulle, with a wide, gathered, buttoned or worn open to show the satin facing. Tailor-finished lapels are formed where they meet the rolling collar, and bishop sleeves with tucks on the outside to the elbow drop over the shoulders, embroidered with rows of stitching and small tailor buttons.

A prominent feature of the season's fashions is the increased popularity of the princess long coat or redingote, that appears in many graceful forms, made of varied fabrics, and with both simple and elaborate decorations, according to the particular use for which it is designed. Many of the best French designers are making a form of redingote dress that is quite unlike the flowing Empire styles of seasons past. It consists of an underdress of satin foulard that is very often finished with a bias band of velvet bordered with Persian-patterned silk braid. Above it, following the natural curves of the figure, is a princess redingote, open-fronted, and cut down in the neck, the edges from shoulder to shoulder finished with a bias band of velvet bordered with Persian-patterned silk braid. The top of the foulard collar or fitted underdress produces the effect of a gump above the low-cut redingote. For very slender figures these redingotes are made of the new zephyr or "chiffon velvets," woven with a lustrous silk back. They are lighter in weight than the old-fashioned redingotes, and they have a rich surface as soft and velvety as the petals of a pansy.—N. Y. Evening Post.

The World Weekly.

Lillian Whiting, in Boston Budget.

In like manner, it must be always remembered, there is but one Substance, and Spirit (so called) and Matter are not two things, but *two states of the same thing*, just as solid, palpable, incompressible ice is, under another condition, the same thing as fluid, invisible, compressible vapor. We all see without surprise ice pass, first, into water and then into vapor; yet many find themselves utterly unable to conceive of a similar transmutation of other forms of sensible condensed Matter into imperceptible diffused substance. Nevertheless, Matter is simply Substance in a state of incessant and inconceivably rapid motion; it is the result of the perpetual rotation of ultimate substantial particles. As the planets revolve, so does every microscopic molecule in the universe revolve; for all are the offspring of the same conditions; subject to one force, and obeying one and the same law. . . .

The substance of the soul, and therein of all things, and the substance of Deity, are one and the same; since there is but one Substance. And of this substance, the life is also called God. Who, as Living Substance, is at once Life and Substance, one and yet twin, or two in one. And that which proceeds from these two, and is, theologians call the Son, and the Word, and is necessarily the expression of both, and is, potentially, the Universe, for He creates it after His own Divine image by means of the Spirit. He has received, now the Divine Substance, in its original condition, homogeneous. Every molecule of it, therefore, possesses the potentialities of the whole. Of such a monad, in its original condition, every individual soul consists. And of the same substance, projected into lower conditions, the material universe consists.—The Perfect Way.

It was a thrilling and a sublime suggestion offered recently by Professor Dolbear of Tufts College that the problems to be solved in the Twentieth Century, may, as yet, be as unrevealed to us, as in those first dawning years of the new period, as were the great problems that arose and were solved in the closing decade of the Nineteenth Century, to those living in its earliest years. During that closing decade there was discovered the X-ray; electricity, as the most potent and practical power, was developed, and the idea of wireless telegraphy even dreamed to be comprehended and utilized in the opening years of the present century. It was, indeed, well within the Victorian period that the discovery was made by means of the invention of the solar spectrum, that the stars were composed of the same substance as is the earth; and that the possibilities of weighing them and of measuring their relative distances was also recognized. This discovery registered itself as one of the remarkable epochs in scientific progress and was as unforeseen in the opening years of the Nineteenth Century as were the later discoveries of the Röntgen ray and the development of electricity as a practical power in commercial activity. So, by analogy, how undreamed of, as yet, may be the discoveries that await humanity before the dawn of the Twenty-first Century. One of these—a discovery so marvellous and so sublime as to absolutely thrill one with awe to contemplate it, is that of the possibilities of ascertaining the definite limits of our own universe. There are now,

Professor Dolbear notes, 220,000 stars recognized by the astronomer, but the proportion of faint and dim stars is so small compared to this number, that it suggests that the telescope is already near to revealing the absolute entirety and completeness of the universe in which the earth is contained. Again, the professor speaks of the "runaway" star, which is moving at a velocity of two hundred miles a second; a velocity greater, Professor Dolbear states, than would be possible to it in our combined attraction of all the stars in our universe. The solution, then, of its speed would be that another universe was drawing it on. Another question, too, presents itself as to whether our universe, moving at the rate of a million miles a day, is merely drifting through space, or is following the rotation by the law of attraction? The latter question suggests its own strong affirmative answer, would be to vary from all the human conceptions of planetary systems.

The possibility of so extending scientific knowledge as to actually recognize the limits of the universe in which we live is one that brings humanity into an infinitely closer comprehension of God and His Divine laws, and the intimate relation between the spirit of man and the Divine spirit. Matter and spirit, even, are but different degrees of the same substance. All scientific problems are ethical, are spiritual, problems. Two are interchangeable. "Can man by searching find out God?" This possibility approaches, constantly, to the possibility,—"through the ages an increasing purpose runs, And the thoughts of men are widened with the process of the suns."

Every succeeding century brings humanity to a somewhat clearer perception of the nature of the Divine Creation. However slowly, yet none the less surely, does the comprehension of man and his place in the universe, and his oneness with the Divine life increase with every century. Just as Edwards taught that while nature might reflect the Divine image, man could not, being in a "fallen" state, until regenerated. Putting aside the mere dogma involved in the "fall" of man, the other matter, that of regeneration, of redemption, is undeniable, even though we may interpret this process in a different manner from that of the great eighteenth century theologian. The redemption, the regeneration of man lies in faith. In that is the substance through which and by means of which he comes into conscious communion with God. It is by the intense activity possible to this mental attitude that he conquers the problems of the universe, that he advances in knowledge, and advances in the increasing capacity to receive the Divine messages and to follow the Divine leadings. Capri, Italy.

Notes and Queries.

WHITE FEATHERS.—"C. S.": No white pigments have been found in feathers. The color of white feathers is usually explained to be due to a total reflection of the incident light from air spaces or bubbles in the feather structure. White feathers do not differ essentially in structure from black, red or other colored ones, except in the fact that no pigment is present. Though some of the white comes from the walls of the air-containing medullary cells of the barb, the larger portion is produced by barbs which have no air space. The white effect, as with snow or powdered glass, is dependent upon the small size of the structural elements. These have a large number of surfaces so placed for any position of the eye that the angle of incidence equals the angle of reflection, with a maximum reflection to the eye. There is almost no absorption by the unpigmented feather substance, and the amount of light transmitted through the feather from objects behind it is so small as to be imperceptible to the unaided eye in the intense reflection of light.

REVOLUTIONARY HIGHWAYWOMEN.—"S.": The Martin family numbered nine sons, seven of whom were fighting for the cause of independence. One day in 1776, the seven sons and wives of the two eldest that a courier conveying important dispatches to the enemy was to pass that night, guarded by two British officers. They determined to obtain possession of the papers. For this purpose they disguised themselves in their husband's clothes and took their station on the road. When the courier appeared they rushed from their cover and demanded the instant surrender of the dispatches. The men, related to the cause of independence, and soldiers secured the submission and delivery of the papers. The courier, however, was not to be deterred by the daring act of the highwaywomen, and he was escorted by F. O. C. Darley. See Mrs. Elliott's "The Women of the American Revolution," p. 27.

KING CHRISTIAN.—"Ranger": The father-in-law of King Edward of England, although he was probably the best-loved monarch in Europe, died a hard death when he first ascended the throne. War with Germany, Denmark and the rich province of Schleswig-Holstein, and the independent Danes didn't like it, and blamed the king for it. He was so depressed sometimes that he shut himself up in his room, and he was so weary that he could not get up. In time, however, even the roughest soldiers came around to the view that if they must have a king at all, they could not do better than have the kindly gentleman who was wont to roam around the streets of his capital in rather shabby clothes, always short of pocket money, attended only by his big dog, and not above hobnobbing with any one that interested him. On one occasion, when he was out, he met a party of soldiers who were on strike and disputing whether or not they should return to work. "Here comes the king," said one of them. "Let's ask him about it." They went, and stood around him on the steps and duties of capital and labor. The joke of it was that after he had gone they decided to return to the strike.

ARMY IN FRANCE.—"D.": Sixty years ago almost no army was in France. During the Algerian war (1844-47) the soldiers were advised to mix with the civilian life as a habit. On their return they brought with them the habit of drinking, which was not so widely and disastrously disseminated in France, and which croakers predict will be, in another twenty years, a widely and as disastrously disseminated in America. It is used here more as a habit, originally used by the French, than as a medicine. Probably a part of the reason is that in any other city in America it is drunk as the Parisian boulevardier drinks it. But even in New York in comparison with the hotels or buffets is a "drugged about" square miles. The war began Oct. 11, 1890, and ended May 31, 1902. The British losses were 16,108 died of wounds and disease, 5774 killed in battle; the Boers lost 3700 killed and 40,000 wounded. The number of Filipinos in arms was not known with any accuracy; we sent 128,000 soldiers to the Philippines, and the average number there was about 40,000. The area covered by the operations was about 60,000 square miles, and the war lasted from Feb. 4, 1899, to April 27, 1902. Our losses were killed and died of wounds and disease and other causes, 4155.

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The oleo law does not seem to be working out in practice along the lines expected. The law provided for a revenue tax on uncolored oleo and ten cents a pound on oleo colored to resemble butter. Internal revenue office reports show a not very large decrease in the oleo production since the oleo law was passed, and this is due, it is believed, mainly to the disturbing effects of the enactment. It is predicted, however, that the new fiscal year will show a resumption of the average production and consumption of oleo. It is further shown, however, that practically the entire product of fifty mil-

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